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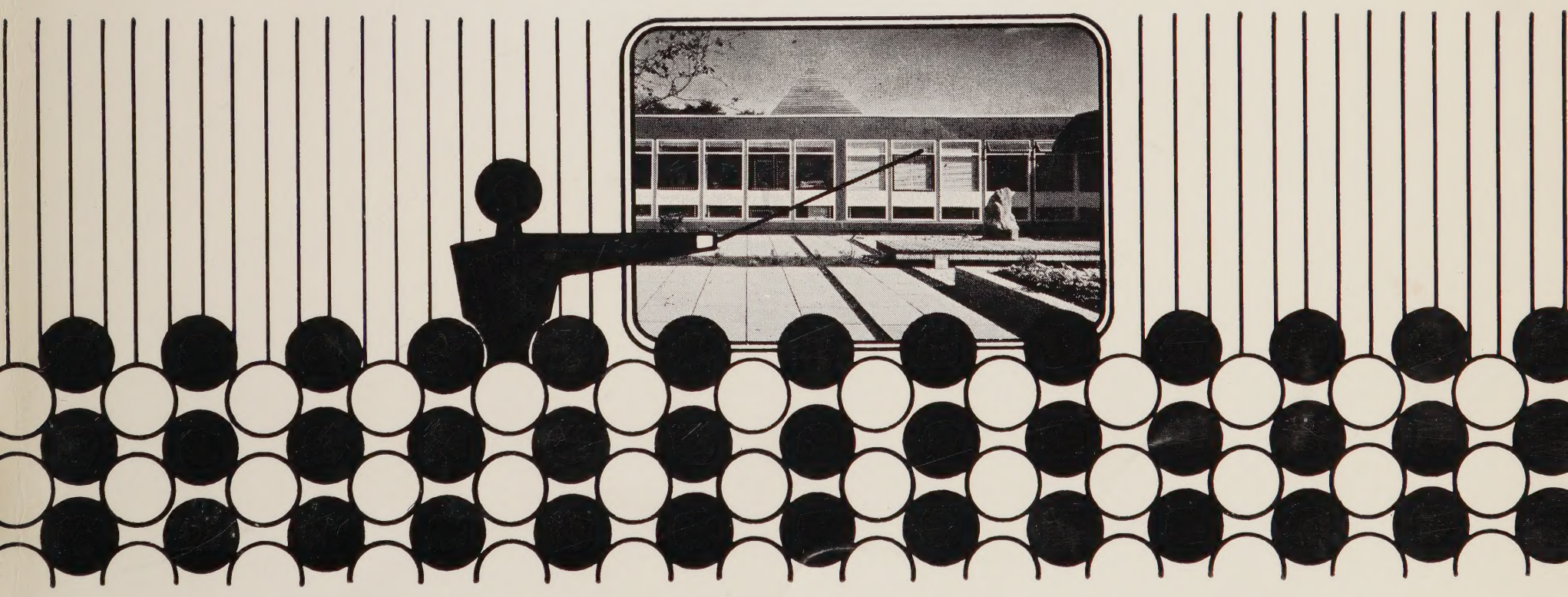

Scottish Hospital Centre

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PREFACE

Conferences at the Scottish Hospital Centre bring together a broad cross-section of medical, nursing and other hospital personnel and also representatives of organisations both within and outside the National Health Service whose activities have some bearing on hospitals. It is never possible to invite to one conference all who have a particular interest in the subject under discussion or even all those who could make substantial and authoritative contributions; these conference reports are therefore prepared in some detail and given very wide distribution. As in previous years the reports of conferences held during 1970 have now been brought together in one volume.

Some of the conferences reported in this collection were arranged in conjunction with exhibitions or functional studies at the Scottish Hospital Centre. Others have presented new work on the functional requirements or construction of in-patient accommodation. Two have concentrated particularly on the specialised activities of nurses in planning and in research. The opportunity to meet and exchange views at the Centre is widely welcomed; it is hoped that a record of these conferences will be of general interest and value.

April, 1971.

A.R.H. BOTT
Director

CHAIRMEN

Chairmen of Conferences were drawn from the Council of Management of the Scottish Hospital Centre

Mr. A.R. Batchelor

Dr. J.H.F. Brotherston

Sir Ronald Johnson

Mr. J.K. Johnston

Mr. G.G. Savage

Dr. J. Sturrock

MAIN SPEAKERS

Provision for the young chronic sick - January 1970

Dr. W.T. Thom, Medical Officer, Scottish Home and Health Department.
Professor W. Ferguson Anderson, Department of Geriatric Medicine, Stobhill Hospital, Glasgow.
Dr. A.W.D. MacIntyre, Department of Geriatric Medicine, Stobhill Hospital, Glasgow.
Mrs. J.M. McCall, Matron, Cowglen Hospital, Glasgow.
Mr. A. Glover, Managing Director, Haven Products Limited, Largs.
Mr. M.A. Gillespie, Director of Social Work, Corporation of Dundee.

Geriatric ward units in the district general hospital - February 1970

Mr. P. Mackay, Principal, Scottish Home and Health Department.
Dr. W.T. Thom, Medical Officer, Scottish Home and Health Department.
Miss E.K. McNaught, Nursing Officer, Scottish Home and Health Department.
Miss E.A. Reid, Nursing Officer, Scottish Hospital Centre.
Miss D. Norton, Nursing Officer, Scottish Home and Health Department.
Mr. R.M. Robertson, Architect, Scottish Development Department.

Provision for children in hospital - April 1970

Professor J.H. Hutchison, Department of Child Health, University of Glasgow.
Dr. P. Macarthur, Consultant Paediatrician, Raigmore Hospital, Inverness.
Miss S. Barlow, Ward Sister, Western General Hospital, Edinburgh.
Miss J. Mander, Nursing Officer, Scottish Hospital Centre.
Dr. H.W.J. Park, Medical Superintendent, Board of Management for Yorkhill and Associated Hospitals, Glasgow.
Mr. I.G. Plenderleath, Partner with Messrs. Baxter, Clark & Paul, Architects, Glasgow.
Miss O. Hulme, Matron, Royal Hospital for Sick Children, Glasgow.

CLASP feasibility study - April 1970

Mr. B.P. Beckett, Chief Architect, Scottish Office.
Mr. K.R. Town, Senior Architect, Scottish Development Department.
Mr. B.W. Payne, Assistant Regional Architect, Western Regional Hospital Board, Glasgow.
Mr. A. Gorrie, Principal Assistant Engineer, Western Regional Hospital Board, Glasgow.
Mr. W.A. Brown, Principal Assistant Secretary, Western Regional Hospital Board, Glasgow.
Mr. A. Duncan, Quantity Surveyor, Scottish Development Department.

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Nurse planning and commissioning - October 1970

Miss M.E. Scholes, Chief Nursing Officer, Board of Management for Ninewells Hospital, Dundee.
Mrs. J.B. Stables, Senior Nursing Officer, Board of Management for Ninewells Hospital, Dundee.
Mrs. C.R. Stables, Nursing Officer, Board of Management for Ninewells Hospital, Dundee.

The nurse and research - November 1970

Miss P.S. Hume, Tutor, The Royal Infirmary of Edinburgh.
Miss W. Hunt, Research Associate, Department of Nursing Studies, University of Edinburgh.
Miss D.Y. Kilgour, Special Nursing Officer, Department of Nursing Studies, University of Edinburgh.
Miss P.A. Grosvenor, Lecturer, Department of Nursing Studies, University of Edinburgh.
Dr. M. Scott Wright, Director, Department of Nursing Studies, University of Edinburgh.

Rehabilitation services for mental deficiency - November 1970

Dr. R.C. MacGillivray, Physician Superintendent, Lennox Castle Hospital, Lennoxtown.
Mrs. J. Matheson, Social Work Adviser, Social Work Services Group, Scottish Education Department.
Mr. T.D. Black, Principal Careers Officer, Corporation of Edinburgh.
Mr. A. Young, Regional Disablement Resettlement Officer, Department of Employment.
Mr. M. MacKenzie, Rehabilitation Officer, Hillington Industrial Rehabilitation Unit.
Mr. S. Jackson, Principal Lecturer, Department of Remedial Education, Jordanhill College of Education, Glasgow.

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Mr. M. MacKenzie, Rehabilitation Officer, Billington Industrial Rehabilitation Unit.
Mr. S. Jackson, Principal Lecturer, Department of Remedial Education, Jordanhill College of Education, Glasgow.

OPENING SPEAKERS AT DISCUSSION SESSIONS

Dr. N.M. Macmichael, Consultant Physician in Geriatric Medicine, Longmore Hospital, Edinburgh.

Dr. J. Crorie, Consultant Physician in Geriatric Medicine, Cleland Hospital, Near Motherwell.

Professor J.L. Henderson, Department of Child Health, University of Dundee.

Dame Muriel Powell, Chief Nursing Officer, Scottish Home and Health Department.

Dr. G.D. Forwell, Principal Medical Officer, Scottish Home and Health Department.

Miss K.B. Richards, Director of Social Work, Clackmannan County Council.

Provision for the young chronic sick

Meeting at the Scottish Hospital Centre on Friday, 30th January, 1970.

The term Young Chronic Sick has been variously defined. Services for these patients can be difficult to identify. This conference showed the need for further evaluation of the whole subject over a wide age band in hospital and in the community.

DR. J. STURROCK took the Chair.

DR. W.T. THOM, Medical Officer, Scottish Home and Health Department, drew attention to the different meanings which the term "young chronic sick" had for different people. The Macdonald Committee in 1964 interpreted it to mean "those persons aged 1 to 35 years who required long periods of supervision, care, training or rehabilitation because of impairments to and deviations from normal health which are permanent or which leave residual disability". Maladjustment and mental deficiency were excluded. Their investigations included a great deal of what is now considered part of the paediatric, pre-school and school medical services, but it stopped half-way through adult life.

A Working Party of the National Fund for Research into Crippling Diseases, set up by the Central Council for the Disabled in 1965, included in its review females from 16 to 60 years and males from 16 to 65 years of age, that is, school leaving to retirement. Mental disorder, blindness and deafness were excluded.

In 1966 Rankine and Weir carried out a pilot study in Fife with the object of ascertaining the extent of chronic illness and disability in the young and middle-aged in a normal population. Their definition was "any person above age 16 years and below age 60 years suffering from long-term physical illness or disability of such nature that the individual is unable to take part in the normal activities of daily living".

In 1967 the Research and Intelligence Unit of the Scottish Home and Health Department carried out a census of young chronic sick in hospital, including "patients aged 15 to 59 years who are receiving long-term care for chronic disabilities or illnesses other than those with long-term mental illness or sub-normality, but including those with brain damage due to injury". In an explanatory note it was stated that "long-term" should be taken to mean both patients likely to remain in hospital indefinitely or until death, and patients with chronic disabilities or illnesses normally looked after at home, but temporarily accommodated in hospital to help the family.

The National Fund for Research into Crippling Diseases Working Party mentioned already, found that there was a great paucity of information on the size of the problem, and decided to undertake surveys on this in Edinburgh and Exeter. The final analysis of these surveys was not yet available, but in the preliminary report figures for the disabled in Edinburgh referred to all degrees of disablement in the 16 to 60 female age group and 16 to 65 male.

In 1967 Miss Amelia Harris and Miss Judith Buckle of the Government Social Study, mounted a very large study into the chronic sick and physically disabled of 16 years of age and upwards in Great Britain with no upper limit. This survey divided all persons into eight categories varying from Category 1, "absolutely immobile", to Category 8 "not handicapped", and although it did not classify chronic sick by age, the results would be capable of break-down into age groups.

In their survey, Rankine and Weir identified 87 persons meeting their description of the young chronic sick from a sample of approximately 33,000 (some 10 per cent of the population of Fife). Five were permanently in hospital. They concluded that 3 per 1,000 total population would be a reasonable estimate; if applied to the total population of Scotland, this would suggest a figure between 15 and 16,000 persons.

In the Edinburgh survey, Seiler and Lowther estimated that there were 9,170 disabled persons living in ordinary households in Edinburgh, and of these some 1,200 would be moderately or severely disabled and would come within the definition "young chronic sick". A further 249 persons were estimated to be in institutions, giving a total of some 1,450 persons in Edinburgh, a rate of 3.22 per 1,000. On this basis a figure for Scotland would be 16,000 to 17,000 persons. These very approximate figures gave some idea of the size of the problem of the young chronic sick or severely disabled in Scotland who were in need of special care for the ordinary activities of daily living at home or admission to hospital.

It was noted that each Local Authority was required by law to keep a register of the disabled, but registration was optional. While the Edinburgh Register was probably one of the best, only 1,547 persons were recorded in 1968 as against the survey evidence that there were some 9,170 disabled persons in the city at that time. The Register could not, therefore, be used for planning purposes.

The Research and Intelligence Unit of the Scottish Home and Health Department, in their 1967 survey of hospitals, found 891 classified patients in hospital. Of these, some 20 per cent were under 40 years of age, and about 54 per cent were over 50 years of age. This compared with the Edinburgh survey preliminary figure of 25 per cent.

Dr. Thom then went on to discuss the disorders from which the young chronic sick suffered. The main conditions noted in the Fife survey were multiple sclerosis (16 per cent), followed by rheumatoid arthritis, cardiovascular disease and chronic bronchitis, in that order. The last three conditions accounted for the rise in the number of patients in the 50-plus age group.

In the hospital survey the disabilities found included:-

16 to 39 years (180 patients)	Patients	%
Post traumatic lesions of Central Nervous Systems.	44	24
Neoplasms of Central Nervous System.	34	19
Disseminated sclerosis.	33	18
Familial or congenital diseases of Central Nervous System.	21	11

40 to 59 years (711 patients)

	Patients	%
Disseminated sclerosis.	214	31
Vascular lesions of Central Nervous System.	133	19
Neoplasms of Central Nervous System.	83	12
Post infective lesions of Central Nervous System.	47	7

Patients under 40 tended to have greater need of community supportive and therapeutic services, while those above that age made greater demands on institutional services and facilities. Each patient had individual needs, and the final decision depended on the overall picture. The older group were in the position that their family were ageing and might be unable to give the support required to a patient faced with possible exacerbation or advance in the medical condition.

These different factors accentuated the need for a flexible form of provision. On the basis of statistics alone, it appeared that hospital provision was inadequate and should be increased, yet apart from episodic visits for curative and rehabilitative reasons, every effort should be made to keep people at home and in the community. More information on the community situation was required before the number of beds necessary could be accurately assessed. With the results of the two large surveys of the National Fund for Research into Crippling Diseases and the Government Social Survey, this would seem to be near at hand.

Facilities at present available included 300 staffed beds designated for the young chronic sick in Regional Board hospitals. In the Research and Intelligence Unit survey the 891 patients studied were distributed as follows:-

Accommodation	15-39 years	40-59 years
Chronic sick wards	48	208
Geriatric wards	29	304
Acute wards	71	149
Psychiatric wards	10	16
Others (Rehabilitation Convalescence)	22	34

Over 400 places for the disabled and long-term sick were provided by various voluntary organisations without which the situation would be very difficult.

Finally, Dr. Thom discussed the question of which hospital unit was most appropriate to the needs of these patients. Most would appear to be against their admission to geriatric wards, yet the rehabilitation facilities of a modern geriatric unit, with its tempo geared to the pace of the elderly, might be appropriate to the needs of a prematurely aged mildly demented hemiplegic in his fifties. These patients were not so very uncommon. In England and Wales the policy of separate units for the young chronic sick had been accepted, and instruction to Regional Hospital Boards had been issued on these lines. While there was a place for such units, the number, size and population they should serve was not clear.

A private Member's Bill now before Parliament dealt with provision of services and facilities for the young chronic sick. There was a need to give thought as to how it might affect Scotland, and what special provisions would be required in order that it might apply. The balance between rigidity of statutory and flexibility of permissive provision was delicate. "Permissive" could mean over-enthusiastic chaos or complete inertia, yet if well understood, might produce a flexible and valuable service.

PROFESSOR W. FERGUSON ANDERSON, Department of Geriatric Medicine, Stobhill Hospital, Glasgow, expressed the view that a lead should be given in planning a comprehensive service for younger long-term sick. Public sympathy had never been so great, and political opinion was looking for guidance in this direction.

In the Western Region there were approximately 200 beds set aside for the care of what were called the young chronic sick. These people, aged from 16 upwards, suffered in the main from locomotor disorders, and an effort had been made to segregate them from the geriatric units in the region. Throughout the United Kingdom no uniform way existed of allocating responsibility for this group of people.

The first difficulty in planning a service was ascertainment. The great majority were almost certainly in their own homes being cared for by relatives and friends, and while the problem taken over a large area was quite substantial, each family doctor would be involved with only a few such patients.

In former times it seemed that the only placement available to the young chronic sick patient with multiple ailments was hospital if there was no-one to look after him, or if the relatives became unable to cope. For many years such patients were well-cared for in long-term units, but without active physiotherapy or indeed any attempt made to assess their work potential. At Broomhill Hospital the situation had improved in that there was now medical assessment before admission, and physiotherapy and some occupational therapy facilities had been provided.

Analysis of the population of long-stay units revealed that many of the so-called young chronic sick had been in hospital for a great number of years. At Broomhill, 8 females and 2 males had been in hospital for over 21 years, and 46 of the 92 females analysed had been there from 4 to 21 years or more. Only 27 of the 92 had been in hospital up to 1 year. Seven of 25 male patients had been in hospital for over 4 years. From these figures it appeared that, as with geriatric medicine, females lived longer and occupied beds in these hospitals for a much greater time. The units at Cowglen had not been in commission for long enough to allow conclusions to be drawn, but in both these hospital populations the greatest number of female patients were in the 30 to 59 year category.

The first principle in caring for young disabled people was accurate diagnosis, and by and large, this would be made in the acute wards of general or teaching hospitals. Any active treatment would be given, and if the patient had suitable home circumstances and relatives to care for him he would be discharged home. In many cases satisfactory arrangements would be made for the future care of the individual patient, and consideration would require to be given in the acute hospital to the patient's further employment and training and the planning of his future

life. There would, however, be patients with multiple conditions who arrived home competently treated with an accurate diagnosis, full medical care and continuing treatment being given, and yet without their overall potential for a future working life having been accurately assessed. There was a need to take the patient to his full potential and it was extremely difficult to analyse the work potential of a person with long-term disability.

One of the problems surrounding the care of young long-term sick was the number of different agencies involved and the fact that their overall care was the responsibility of no one person. Doctors in practice had to care for such people with their day to day ailments; the neurologist and physician, the neuro-surgeon, the orthopaedic surgeon, the cardiologist and others were involved in a specialist capacity in making a diagnosis. The expert in medical rehabilitation was asked to decide a future retraining programme, and the continuing care of patients, once settled in their own home, would be the responsibility of the Local Authority. Moreover, many voluntary agencies took an active part in the welfare of patients with special types of disability.

One solution to many of these problems might be to have in each region one doctor responsible for the overall planning of services for all young chronic sick. Such a physician would be of greatest help were he to be trained in rehabilitation in all its aspects, and possess a knowledge of the work potential of disabled people. He could be placed in charge of an assessment unit where young chronic sick could be comprehensively assessed as in-patients or as out-patients. There was almost no limit to the number of patients who could be passed through such a unit given specialists in the appropriate disciplines including rehabilitation and adequate supporting facilities. These would include beds in places such as Red Cross House, Largs, for retraining, access to hostels where people could stay in protected circumstances while in industrial employment, and lastly, long-stay beds for those who were considered unable to benefit from retraining and who required constant care and hospitalisation. In addition, there would be a Local Authority unit to which people could come, and where retraining programmes could be developed. It would be essential to have a social work member of the team at the assessment centre, to co-ordinate family and house requirements, and arrangements would be necessary to send work to individuals' own homes.

The problems of long-term disability would not diminish. There would be an ever increasing number of people severely handicapped by trauma of varying types, including road accidents, who would require a long period of continuing rehabilitation and perhaps retraining for industry. Almost all the requirements of the young disabled person could be provided by the different existing authorities; what was required was co-operation and co-ordination of these services, and in particular of the voluntary agencies so that no disabled individual might be excluded from any form of assistance which he might require.

The problems of the young chronic sick were physical, mental and social; their management, which bore certain resemblances to those of the geriatric patient, involved ascertainment, prevention, supervision and community care, and when required, re-assessment, diagnosis and always follow-up. It was essential to give hope and not to reject, to foster independence and the development of the whole integrated person making his way and his living in the world of today.

Revolutionary changes in the situation of the disabled had been achieved by the converging attention brought to bear from three angles; medical, educational and industrial. Along these lines progress must continue, and there was still a long way to go.

DR. A.W.D. MACINTYRE, Department of Geriatric Medicine, Stobhill Hospital, Glasgow, drew attention to the picture of hopeless finality which the term "Young Chronic Sick" conjured up in the mind of the lay person. With planning and purpose this picture might change to one of a future perhaps limited in potential but at least offering a measure of independence socially and industrially. A programme of training, schooling, re-education and restoration to an acceptable and economic place in society might necessitate the individual being hospitalised for perhaps a considerable period of time but with constant and meaningful activity and the ultimate goal being home or a sheltered occupation.

The problem of the young chronic sick was one of illness and age. Taking the five decades from birth to the age of 60, each had its own social, educational and vocational problems. All required the facilities of rehabilitation medicine. A medical classification might include four groups:-

(1) Those suffering from medical, surgical, neurological and other conditions, e.g. juvenile rheumatism or Still's disease, chronic pulmonary, cardiac, or renal conditions, poliomyelitis, muscular dystrophy, disseminated sclerosis, etc.;

(2) The increasing group suffering disabilities resulting from trauma including road and traffic accidents;

(3) Those suffering from congenital defects, in particular, children with absence of one or more limbs and spina bifida;

(4) Those suffering from psychiatric and psychological disabilities including mental subnormality.

With advance in medical treatment and medical science there was a new influx of cases from all branches of medicine. An increasing number of survivors of previously fatal illnesses failed to return to full functional potential, became young chronic sick and required a rehabilitation programme as a normal continuation of the treatment process.

An American pioneer in rehabilitation, Dr. Frank H. Krusen, had defined rehabilitation as involving treatment and training of the patient to the end that he might attain his maximum potential for normal living - physically, psychologically, socially and vocationally. The Institute of Rehabilitation Medicine, New York City, under Dr. Howard A. Rusk, was perhaps the ultimate which we should aim for in Scotland. The young adult, involved in an accident, suffering traumatic injuries to the spinal cord and/or brain would be admitted to the general hospital - University Hospital - where he would be attended to by neurologists, neurosurgeons and orthopaedic surgeons and physicians in the intensive care unit. As soon as possible, sometimes within a week, he would be transferred to the Institute permanently as an in-patient where an intensive programme would start at once. His ordinary medical care would be supervised by the original attending physicians and surgeons visiting the Institute once or more per day. The active and purposeful rehabilitation team started his programme at 9.0 a.m. and continued

until 4.0 p.m. with a break of one hour for lunch. In the evening organised social and cultural activities took place with lectures, film shows, swimming pool visits and so on, all directed to stimulate motivation of full involvement in a whole working day so that boredom, frustration, self-examination and pity were abolished. Staff, in addition to the rehabilitation doctors, included physiotherapists, psychologists, speech therapists, occupational therapists, vocational therapists, recreational therapists, school teachers, medical social workers and visiting physicians and surgeons caring for their own patients. All met once a month to discuss patient progress and alteration to treatment with a view to getting that patient to live at home undertaking some form of gainful employment or to sheltered employment in industry - Abilities Incorporated - a vocational and occupational assessment and training centre very similar to Red Cross House at Largs. Here treatment took place in a large rehabilitation department. Future working capacity was finally decided and after training, employment might be offered in workshops at the centre or in either sheltered or open industry.

In Scotland it was left to organisations like the Red Cross and the Scottish Council for the Care of Spastics and Remploy to provide training for the disabled for a place in commerce and industry. All these bodies did excellent work, but there was a gap between the patient's admission to hospital and his finding continuing therapy in sheltered or gainful employment.

In the Glasgow area expertise was spread throughout 22 hospitals caring for 398 patients. Many hospitals gave an active programme of physiotherapy and occupational therapy, and did succeed in raising the functional status of their patients. Many of these patients should progress further, but required careful assessment before committing them to training in business or industry. In the admission hospital too much time could be wasted in commencing a rehabilitation programme, and schooling and functional capability quickly suffered from inactivity. Hospitals tended to function in an incoordinated way with widely differing goals, which resulted in breaks in the continuing treatment of the patient. With the acceptance of the fact that chronic disability was much more common in the older age groups, lack of treatment had allowed patients to become unnecessarily dependent, so absorbing services and beds which should be made available for other deserving patients.

In Dr. MacIntyre's view, the term "Young Chronic Sick" should include everyone from birth to 60 years, the most important age group being from birth to around 21 years. It was necessary to base the approach to the problem of their care on an appreciation of the positive rather than the negative advantages of the patients. Their functional potential was only one part of the whole, the rest being psychological, occupational and social. This demanded a team approach, and only by concentrating the patients in one centre under a single director in charge who, with his specialised knowledge, could call on any other group or person he felt could help, could a rehabilitation programme be properly organised.

This centre would be a specialised hospital with all ancillary services and specialists to which young chronic sick could be transferred for treatment and assessment as required. Day hospital facilities would be available for out-patient work, and there would be close links with vocational and industrial retraining centres and sheltered workshops. In this way the hospital would know the acceptance levels of each training centre, and much valuable time would be saved. Regular

psychological counselling was indicated for those patients in whom anti-social behaviour problems followed an accident or medical illness. Speech therapy was highly desirable. Occupational therapy and physiotherapy would best be utilised by being prescribed according to the specific needs of the patient - something which could only be successfully accomplished when the physiotherapist, occupational therapist and the doctor could assess and test with an end point in view. The medical social worker bridged the gap between hospital and family, home, business and industry.

Dr. MacIntyre ended by quoting Howard Rusk: "The rehabilitation of the chronically sick is not just a series of restorative techniques. It is a philosophy of medical responsibility. Failure to assume this responsibility means to guarantee the continued deterioration of many less severely disabled persons until they too reach the severely disabled and totally dependent category. The neglect of disability in its early stages is far more costly than an early aggressive programme of rehabilitation which will restore the individual to the highest level of physical, economic, social and emotional self-sufficiency".

MRS. J.M. McCALL, Principal Nursing Officer, Cowglen Hospital, Glasgow, opened by quoting Florence Nightingale - "hospitals are at best only a necessary evil" - an observation which was certainly very true in the case of the young long-term patient.

For the patient requiring constant nursing and medical care, however, the hospital environment was obviously the one of choice, and its planning must cater not only for his medical needs, but in addition for his basic needs as an individual. Once in hospital patients required both care and replacement for a life missed at home. A wide range of facilities was necessary for assessment or re-assessment, for acute and terminal illness, for rehabilitation, and for community care and support. There was a need for sheltered housing, for hostels, sheltered workshops and day centres. Lack of accessibility to buildings could severely limit the activities and social contacts made by disabled people. There was a need for special holiday facilities and, both before and after school-leaving age, for education.

How best to provide all these facilities was difficult to determine, but the approach had to be multi-disciplinary. At Cowglen Hospital, although not built originally as a long-term unit, two wards of 25 beds in 4-bed bays (1 female and 1 male ward) were upgraded, replanned and equipped to meet the needs of long-term patients as far as possible within the limitations imposed by the size and shape of the building. The wards were bright, pleasant and colourful, and the bays allowed some privacy and grouping of patients according to their social needs of friendship and shared interests. There were two day-rooms in each ward, one used as a sitting-room and the other mainly as a dining-room. Although they were of reasonable size, they were crowded when wheelchairs were moved in. Two-hourly toileting was practised, and sani-chairs were used as commodes to supplement the four toilets in each ward which proved inadequate. Both the storage and supply, and the cleaning and washing of clothing presented problems. Lack of adequate finance did not help - a problem common to all disabled persons.

Apart from these disadvantages all normal hospital facilities were available for diagnosis and treatment. These included physiotherapy, occupational therapy, speech therapy, chiropody, and the services of the

medical social worker. In addition to giving basic hospital care, attempts were made to meet patients' recreational and social needs with parties, outings, occupational therapy, hostesses and open visiting. There was scope for a variety of interests and challenges. Religious needs were met and the concept of service by helping each other in many ways was fostered. A limited amount of paid work was available, and this boosted morale, especially for men, but contract work for a small unit was difficult to obtain.

Occupational therapy featured largely in the daily programme with a very wide range of equipment, and with occasional baking or cooking and washing of clothing taking place in the Aids to Daily Living Unit. Fostering independence was a difficult and very slow task. With the main fear a dread of incontinence, the ladies were particularly unwilling to go outside the hospital, even to physiotherapy or occupational therapy or to the Red Cross Centre. With regular two-hourly toileting, confidence had increased and there had been a considerable improvement, although there was resistance to wearing the various types of incontinent pants which had been tried. But none of the women would go to the Multiple Sclerosis Club, and they disliked going on outings to local parks. Very few attended the fortnightly film shows. Most were early bedders, and none stayed up to watch television and bring in the New Year.

At least some sort of choice was offered in what the patients wanted to do. Perhaps the inability to direct one's own life in both small and large matters was the tragedy of chronic disablement, and it was this insularity that produced many of the problems of this type of nursing. Yet perhaps the inward-looking attitude - the institutional outlook that was so difficult to avoid - was the patient's salvation. If it were otherwise, they could not bear their severe limitations. Many were emotionally labile, and inevitably there was some mental deterioration. The skill and natural sympathy and understanding demonstrated by so many Nursing Auxiliaries who had no training other than life itself was remarkable. While verbal assaults were not uncommon, very few of the staff asked to be moved to another ward although sometimes reduced to tears.

The work was heavy and demanding, but if the staffing level was adequate, (and adequate was not the ratio quoted in the statistical returns for chronic hospitals), and the staff had the time to allow maximum personal interest in patients' difficulties and problems, the job satisfaction was great.

About one-third to half of the patients might be incontinent and in need of frequent attention. In order to prevent pressure sores which, in a well-organised unit, should not develop except in terminal illness, regular two-hourly turning at night was essential for those patients with paralysed limbs. For the very small percentage who were confined to bed, more frequent turning was usually necessary.

A large amount of nursing time was required to assist patients with dressing and general toilet. This could not be done in a haphazard manner, or patients' morale would suffer. Feeding was time-consuming, and meal-times produced a peak nursing load undertaken by nursing auxiliaries who maintained a high standard of patient care. Time was also required to ensure that male incontinent patients were fitted properly with portable urinals.

The responsibility of trained staff, in addition to the heavy load of dressings, included active supervision, teaching and support of the nursing auxiliaries. An awareness of all the dangers of bed rest and immobility was essential, and care of the bowel and bladder were extremely important. Support of the relatives was another task, often a considerable one.

Morale of both patients and staff depended greatly on the attitudes of medical and senior nursing staff and on physical and mental activities designed to permit each patient to attain his maximum functional capacity. Perhaps the most important asset a nurse in a ward for young long-term patients should have was imagination - she must see beyond the walls of the ward, and indeed the hospital. The young nurses now being trained in community care would be better equipped to understand the total needs of the individual.

Care of the young chronic sick in its widest sense was not only a medical and social problem, but also a moral one. Our society must face up to it.

MR. A. GLOVER, Managing Director, Haven Products Ltd., Largs, described the organisation as a private non-profit making company whose shareholders were the Scottish Branch of the British Red Cross. Its aim was to provide purposeful employment for the physically handicapped. It was part of, and fully integrated into, the general approach by the Scottish Branch of the British Red Cross towards the rehabilitation of the young disabled. This was based on a multi-disciplinary approach to the seeking out and encouragement of the maximum potential of the disabled person for living, and involved the practical recognition that whilst the potential might be developed to the maximum in individual persons, the potential maxima varied in terms of absolute performance over a wide range of people with differing degrees of disability.

Under the Disabled Persons (Employment) Act of 1944, the State had an obligation to provide facilities to meet the employment and training needs of disabled persons. These facilities were most easily applied in disabled persons where fundamental capability for work and the requirements of industrial training were most closely related. In other cases capability was more difficult to establish because it was hidden or distorted by other medical or social difficulties associated with the disablement. The bringing together of known and unknown employment potential in disabled people into a firm interrelated development programme was the field of work with which the Red Cross and Haven Products were primarily associated. It involved a truly integrated multi-disciplinary approach from the medical, social and industrial standpoint, no single one of which became dominant at the expense of the other two. The practical interpretation of this approach was based on four development stages; the first and second in which unknown employment potential was assessed involved occupational therapy and the work centre. At the third, known employment potential was assessed in the sheltered workshop, and at stage four, in outside industry.

Haven Products was concerned with the complete running as a business of the sheltered workshop stage of the development. It had its own Board of Directors and was officially registered as a private non-profit making company. It arranged work for the first two development stages,

occupational therapy and the work centre. It liaised with and assisted whenever necessary the Disablement Resettlement Officers in the progression of employees to outside industry.

The company had three main locations of activity. At Largs there was a sheltered workshop (31 employees), a work centre (19 residents), and an occupational therapy department (14 residents). At Glasgow (Hillington), there was a sheltered workshop (63 employees). At Inverness there was a sheltered workshop (12 employees), a work centre (4 residents), and an occupational therapy centre (8 residents). Overall, 42% were over 26 years of age, 58% between 15 and 25 years. At Largs, 45% of the residents were confined to wheelchairs, and 15% were effectively one-handed with limited standing ability. At Inverness the corresponding figures were 15% and 25% respectively, and at Hillington the figures were 12% in each case. Medical conditions included spasticity, spina bifida, results of trauma, poliomyelitis, asthma, epilepsy and cardiac disease. By age, 15% were 15 to 18 years, 20% were 19 to 20, one-third were under 21, one quarter between 21 and 26, and 40% were over 26 years of age.

The emphasis at each development stage varied. At stages 1 and 2 there was concentration on personal development of the subject from a medical and social point of view. Work potential received greater attention at stage 2, but was subject to measurement as a yardstick of progress at both stages. At stage 3 sheltered employment was undertaken, with the individual earning wages and concentrating on work as a main avenue of progression. Both place of work and residence were different from those in the earlier stages, and life was more independent. Stage 4 involved graduated progress towards independent living and working in the community. This was facilitated by having a large non-residential workshop near a city, thus allowing introduction of the disabled person to independent living while still in a place of sheltered employment.

It was not intended that each individual should progress successively through all four stages. Acceptance into the system and progression through it were governed by a screening and assessment panel centred round a medical, a social and an industrial member. These were assisted by locally co-opted members - a social worker from the Local Authority which sponsored admissions, an educationalist or educational psychologist, a member of the Department of Employment and Productivity, the Matron of the individual Red Cross house, - all under a chairman whose basic discipline was unobtrusively medical. A general practitioner might also join the panel.

Young disabled people from a wide catchment area in Scotland were considered for entry into a Red Cross House by the panel. They came from residential special schools, from hospitals, from geriatric units, or from their own homes. Applications were made through social workers, Youth Employment and Disablement Resettlement Officers, hospital clinics and doctors and Medical Officers of Health. Medical and social need to develop a latent potential formed the basis for entry. Progress from one stage to another was determined by the panel on the basis of reports from the Matron, occupational therapists, and, at the sheltered workshop stage, from the workshop manager.

The staging system formed a positive, easily seen and understood ladder of progression. The different relative speeds of progression formed a realistic stimulus to the more disabled and to the less disabled alike.

The system allowed an awareness of the development problems of each individual by the panel. It achieved true multi-disciplinary co-operation by broadly defining spheres of activity and responsibility and obviated any tendency to detachment from reality in rehabilitation work in the various stages.

The system, however, was very demanding in that a circulation of people through the stages, however relative, was essential. There was a very real possibility of blockage if entrants' initial potential for progress failed to materialise for whatever reason. Again, provision of suitable work and work organisation could be difficult. The work had to be purposeful, or in other words, of genuine commercial significance. It had to be simple for the most part in order to allow the maximum application to the varying degrees of disablement at each stage, yet work of some complexity had to be provided. The main factor in this was the strong commercially orientated sheltered workshop at stage 3, through which work was channelled into the earlier two stages and taken back. All commercial transactions concerning the work - getting it, delivering it, pricing it etc. were the responsibility of the sheltered workshop manager. Again, it was necessary to have a background of commercial realism if progression was to have meaning. The conditions of work and the wage system had to reflect this realism, and it was vital to the staging system that the latter be geared to market values rather than social obligations. At the same time it was vital that the wage system in the sheltered workshop was not geared solely to output values. It must reward not only output but quality of work, versatility in terms of jobs, effort and attitude to discipline. Above all, attitude to work, and willingness to accept the disciplines of work must never be in question if a disabled person was to progress into outside employment with success.

During the three years 1967 to 1969, thirty disabled persons progressed into outside industries from the three workshops of the company, mainly into textiles and electronics. Rehabilitation could only help when the desire had been generated in the disabled person to help themselves, and the main motivation found in a disabled person requiring a job in outside industry came from the desire to reach significantly higher wage levels for much the same job effort. Coupled with this was a thrust towards independent living in the community, brought about by the realisation that he or she had quite outgrown the communal living contact which was so acceptable at the beginning.

The essential requirements in the background to commercial realism were economic. Management must view personnel decisions and the quality of its product in terms of a trading account and balance sheet. Management accounting techniques must be applied at the point of business rather than in a remote accounting context. The essential advantages of this were greater speed and flexibility of decision, a more effective contribution to multi-disciplinary team-work, a more purposeful working atmosphere in the workshops, and reduction of operating costs.

Haven Products was now responsible for over 10% of the total sighted disabled in sheltered employment in Scotland. For the financial year just ended, the gross value of output per disabled employee was some £900, and the overall cost to the company after all expenses, including depreciation, had been met, was just under £7 per disabled employee for the year.

MR. M.A. GILLESPIE, Director of Social Work, Corporation of Dundee, expressed his hope that social work and the Local Authority Social Work Departments had made, and would increasingly make, a contribution to helping the young chronic sick. It was his belief that there was a common basis to all social work and social case-work which was capable of adaptation in meeting a wide range of needs. It was apparent that many of the techniques of the social case-worker were of especial relevance to the young chronic sick. The fundamental case-work principle of continuity of relationships was clear, and the helping process was likely to be extremely limited if the patient was regarded in isolation from other members of the family and those close to him in the wider community. What was desirable was a well-established and well used method of contact and communication between hospitals and other residential institutions caring for young chronic sick, and the community based Local Authority Social Work Services. Social work departments must recognise the need to co-operate, co-ordinate and communicate between separate services with similar objectives, so avoiding the patient being left with the impression that he was being passed from one authority to another. There must be many instances where help was available if only the patient knew of whom to ask.

There were some problems which, although not unique, were particularly relevant to the young chronic sick. In that they were young, the frustrations of a chronic illness and associated physical handicap probably presented themselves in a particularly intense form. Because, compared with other clients of the Social Work Department, they were small in numbers, the Social Work Departments had a special responsibility to ensure that the complex needs of young chronic sick were not ignored in a welter of activity for other larger and often more vociferous groups of dependent people in the community. Their social and medical needs could be constantly changing or growing. No two persons' needs were the same, and their situation might be one of relative stability for long periods, followed by a crisis precipitated by physical deterioration. Some might have adequate and appropriate support from family and community, while others were relatively neglected or over-protected. The community services required to be particularly flexible for this group and their families, and there was a need to ensure that contact was maintained over very long periods, even though no immediate and pressing need was currently presented. Dependence on others was frequently social and emotional in varying degrees as well as physical. A high degree of emotional and intellectual adjustment was necessary to accept a dependant role. Many young chronic sick had family responsibilities, and it required a high degree of skill, both on the part of the patient and those helping the family, to find the right balance between fulfilling family responsibilities and being overwhelmed by them. It was essential to see beyond the patient's needs to those of the family.

While the provision of supportive help to the individual and his family was a primary role of the social worker, it was also his job to provide information and direct advice on how to obtain help from other sources of the welfare state - a guide in the labyrinth of statutory welfare. The social worker was the representative of other Local Authority services, and should be prepared to use these whenever needed. It was possible to press for appropriate housing, and for aids and adaptations which were available. It was the social worker's function to act as a go-between on behalf of the patient, who might benefit from the resources of the Department of Employment and Productivity Rehabilitation Service and the Disablement Resettlement Officer.

In many areas the Home Help service had been transferred to the Social Work Department, and should, as in the past, be available to assist either the disabled patient or his family. Whatever future developments might take place, the Home Help service was seen as an essential part of a community care service, and there were a number of ways in which greater flexibility in the use of home helps might be introduced. In order to widen their role in helping a family, a basic training programme should include skills in child care and household management, thus extending beyond their present duties of routine cleaning and simple cooking. By advising on the provision of aids in the home, or even in the design and planning of homes for disabled people, community-based occupational therapists could assist the young chronic sick to lead as active and stimulating a life as possible. Again, it fell to the Social Work Department to give an indication to voluntary organisations where help was needed, both for individuals and groups with similar handicaps. Without the help of the numerous voluntary organisations, statutory services would be in a very embarrassing position.

The provision of day centres, either by local authorities or through their development by voluntary organisations, would allow the occupational therapist to develop group activities, and would allow social workers to see patients away from home environments and to give some indication as to whether the patients who attend are capable of a wider range of activities than is apparent in their own home. A day centre might also be used for further education courses for which attendance at a normal further education establishment was not possible. Finally, the Social Work Department could offer advice to town planners on the implications of development plans for the physically handicapped, and to housing authorities as to the quality and quantity of special housing, and it should foster contacts with youth and community services for special recreational facilities.

In general, the Social Work Department should encourage an approach to the needs of the young chronic sick which included them as full members of the community and reduced the risk of their becoming isolated and thought of as totally different.

DISCUSSION

DR. N.M. MACMICHAEL, Consultant Physician in Geriatric Medicine, in opening the discussion, expressed his gratitude to speakers for the contributions made on the aspects of provision for young chronic sick. The audience included representatives of voluntary bodies, nurses, social workers, administrators and clinicians who required some knowledge of the subject as a whole to gain a wider understanding of their own specific role. An account of the physical disabilities and social implications had been given with hospital as the last resort for care. In defining the term "Young Chronic Sick", failure to include all patients between the age of 16 and 65 would mean a large number being excluded, for example, at 45 or 50 leaving no one individual responsible for their care.

The majority of patients were in the upper age group. At Liberton Hospital, 59 young chronic sick had been accommodated or were on the waiting list. Fourteen were between 40 and 49 years of age, five were below 40, and the others were over 50. Sixteen (25%) suffered from multiple sclerosis. The older group mixed with geriatric patients

provided the latter were not mentally confused. The young had proved most difficult to deal with having psychological problems and being generally frustrated, and perhaps there was a case for segregating those below 40 years of age - the very young chronic sick.

From the survey of all patients in hospital, there appeared to be a need of one bed per 10,000 population for young chronic sick. The Fife survey suggested two beds per 10,000 population but both ratios were little more than an inspired guess. It was possible that, by providing facilities, a far wider demand would be raised. There was a need for accurate assessment of potential demand and for subsequent overall planning of services: hospital, home and community. There was a case for co-ordination to prevent the present fragmentation of effort among voluntary organisations and others.

For rehabilitation, it might be possible to establish a unit on the New York pattern if all the occupational therapists and physiotherapists in; Edinburgh could be centralised in it. This was a pipe-dream but with a grain of reality. A rational approach to assessment was essential. The care of the young chronic sick with their loss of independence involved a multi-disciplinary approach. The establishment of a panel to review patient progress through stages of occupational activity was sound. There was a need for purpose-designed accommodation for such a service and the use of old buildings adapted for the purpose should not be encouraged.

The Social Work Service was as yet untried and time was necessary to allow its development. In considering the needs of the young chronic sick individual, account should be taken of the circumstances of his family.

At Liberton Hospital, self-respect was fostered. A purposeful existence with filled leisure time was the goal. Its success depended on good nursing staff and the calibre of the sister who was adviser, confessor, disciplinarian and mother. Occupational therapists, physiotherapists and voluntary helpers with sheltered employment services all contributed to the needs of the patient.

In the general discussion other points to emerge included:-

(1) Purpose-built units

Efforts were being made by voluntary organisations and others toward building special units. Some planning guidance had been published but experts were few, and advice on the need for facilities and where these should be provided, would be welcome. The British Red Cross hostels at Largs had been purpose-built, and a British Red Cross Society publication was available entitled "A place at work". Reference was also made to "Designing for the disabled" by Selwyn Goldsmith.

Local Authorities were encouraged to build hostels, but while they provided a service, either individually, or by combining together, or sometimes through voluntary bodies, lack of capital and difficulty in obtaining suitable sites hampered building activity.

No hospital service units were being purpose-built, but an allowance was made in district general hospitals for the provision of rehabilitation units. The differing needs of the over and under 40 years of age groups were mentioned; there was a need for

further information on exact requirements. It might be necessary to group the under-40 patients together in units which, in order to be viable, would be distant from their homes.

(2) Provision of services

The Piercy Report (1956) on the Rehabilitation, Training and Resettlement of Disabled Persons reviewed provision on a national basis, and concluded that the range of services already provided or capable of development covered all aspects of the disabled. Criticisms were directed mainly against failure to make use of these facilities - lack of co-ordination of services, etc. Most of the services existed, but those who needed them were not recognised.

From the Fife survey it was concluded that a very small number of patients were under 35, and there was a rapid increase over 40 years of age. Local authority services were better known and used by the young, and this survey suggested that in terms of medical care, education and rehabilitation, their needs were adequately met. Again, a recent census of chronic sick in hospitals in Edinburgh had shown that only 10% of patients were in the under-40 group. To provide services for those under 35 to the exclusion of others would be short-sighted. There was a substantial group of older patients not given the opportunity of rehabilitative treatment. The psychological effect of continued unemployment was not always recognised, and efforts must be made to include those over 40 years of age.

Taken overall, there were gaps in the service. There was a need for accurate ascertainment of all classes of patient over a wide age band so that no-one in need was overlooked. There was a case for co-ordination of facilities already available and for a comprehensive service based on accurate and continuing assessment of the individual patient. Many factors affected the optimum size of the different units of accommodation which might be provided. There was a need to identify and consider these factors and to make recommendations.

(3) The community service

There was a need for a community survey to identify those people who were at home, and their needs. Patients appeared to be relatively small in number and relatively scattered. For the Social Work Service there was a question of selection of priorities with overwhelming pressures for the needs of children and elderly alike. With amalgamation of local authorities, a better service might be forthcoming.

(4) Special groups

Chronic disability resulting from head injuries, formed a large and increasing problem. These patients were young (under 40), and did not always require permanent care. They might need two or three years in hospital yet recover, but a short break in treatment could cost a long recovery period. There was a need for some continuous service for these patients, who suffered a physical and mental handicap. Distance from appropriate services was allegedly a problem but patients were prepared to

travel a long way to get into special units such as Stoke Mandeville. If higher quality service was available by going further, people would go. At present, there was a tendency for patients to be sent to unsatisfactory accommodation because of the pressure of other patients coming in to acute facilities.

Patients with spinal injuries presented problems both in the young and in the middle-aged. It was the general aim of paraplegic units to get everyone home if possible. While this was usually the case with those in the younger age group, there were a few who remained in hospital and who had wide ranging problems. The great difficulties were with the middle-aged, the group which had been missed in the Macdonald Report. Again, the Scottish Home and Health Department survey of chronic sick related to those who could not go home whereas many disabled, including paraplegics, were at home. For all patients, accurate assessment was essential. For patients in the paraplegic unit, work continued from 9.0 a.m. to 4.0 p.m. but there were problems with lack of interest and with evening recreation, and once the patient had left hospital, with employment. There could be financial disincentive in that those with industrial injuries could be better off staying at home. Some were happy in idleness; if patients earned more than 40/- a week in the Occupation Centre, they lost other benefits. While there were hospitals for those who could not go home, there were patients who were not looked after properly if sent home, and for whom hostel accommodation was necessary. Home helps could be of assistance in many cases, and local authorities contributed substantially to patient costs, but there was a need for community hostels, perhaps with day centres attached.

There was an increasing number of children in need of long-term care following a period of treatment in an acute hospital.

The view was also expressed that of those adults who were rehabilitated and went into industry, 10% would return, unable to continue in the particular employment.

(5) The Industrial Manager

The industrialist was one of the team who contributed to the rehabilitation of the patient, using his special knowledge and experience. The problem in applying industrial methods in organising workshops for the disabled was that their real requirements tended to go against current management techniques in industry. At one time, the manager was his own time and motion and personnel expert. Now these activities tended to be split off in industry. In dealing with the disabled there was a case for a manager who could apply these techniques himself. He must distinguish between a business method and an emotional involvement in the problem. Paper qualifications were not so important as width of experience. The main requirement was the ability to get on with differently orientated people.

Geriatric ward units in the district general hospital

Meeting at the Scottish Hospital Centre on Friday, 27th February, 1970.

This conference presented the results of a study undertaken by a multi-professional team from the Scottish Home and Health Department into the functional requirements of a geriatric assessment ward suitable for the next generation of district general hospitals.

MR. J.K. JOHNSTON took the Chair.

MR. P. MACKAY, Principal, Scottish Home and Health Department, in opening the conference noted that in the last four years or so, more than 1,000 additional beds for geriatric patients had been provided in Scotland and that the total number of beds available now approximated to the target of 15 for every 1,000 of the population over 65 suggested in the Hospital Plan for Scotland. This achievement however did not mean that there was not much remaining to be done in terms of increasing provision in certain areas and upgrading sub-standard accommodation. While the Department had been particularly anxious to promote the development of geriatric assessment units in district general hospitals, little had resulted in this direction, much of the effort in recent years being devoted to providing new accommodation in other situations.

It was noted that the Department had for some time been interested in developing standard plans for hospital buildings and this included geriatric assessment units. Standard plans could lead to a reduction in the amount of ad hoc work carried out on particular projects and full account could be taken of the collective national experience of the operation of hospital units. The view was also taken that in order to ensure speedy and economical construction, hospital buildings based on standard plans must be capable of construction using one of the semi-industrialised or system-building methods now in operation. In 1968 therefore, the Department decided to carry out, in close association with the Regional Hospital Boards, a feasibility study of the development of standard ward plans using the CLASP system of building which, while well tried out in other fields of public building, had not been widely employed in the health service. Although the feasibility study was mounted with particular emphasis on the development of a design for standard acute wards in district general hospitals, it was recognised that for some specialties adaptation of this plan would be necessary. It was a fundamental part of the policy relating to district general hospitals that each should have associated with it an assessment unit for geriatric patients from which the district service would operate. It was recognised, therefore, that if the full benefits of system building and standard planning were to be achieved, the plan had to be capable of satisfactory adaptation to meet the needs of the geriatric patient.

A small Departmental working group was accordingly established to consider the requirements of geriatric patients in relation to the standard acute ward plan being developed. Inevitably, however, as different versions of the plan for an acute ward were prepared, it became evident that it would

be impracticable for the group to devise a complete and comprehensive design and schedule of accommodation until the final version of the acute ward plan had crystalised. It was decided, therefore, that initially the team would concentrate on isolating the main principles which should be taken into account in the planning of a geriatric assessment/rehabilitation unit and, when these had been identified, ensuring that any standard plan generally adopted for district hospitals was compatible with them.

It was appreciated that the detailed work carried out on the Falkirk ward project had led to the evolution of an acute ward plan which had proved to be efficient and practical in operation and it was, therefore, agreed that this should be accepted as the basis for the development of thoughts on standard planning. At the same time to highlight the particular functional requirements of geriatric wards, visits were made to several new and upgraded units in Scotland. From the information collected, it was apparent that, depending on the needs of the local geriatric service, many similarly designed units were admitting different categories of elderly patient. By studying these units and taking account of the many opinions expressed as to the requirements of a geriatric ward, an operational policy which placed a more than usually high premium on flexibility was gradually evolved. It was felt by the group that, so far as practicable, the design should permit the many operational policies now being pursued in geriatric wards to be followed without any significant restraints due to design limitations.

In conclusion, Mr. Mackay noted that, since they could not say conclusively that their objects had been achieved until a unit based on the plan had been built and evaluated, the group did not intend to present a body of unassailable facts and truths. It was hoped that the presentation and the reaction of the conference would play a significant part in the evolution of the design of assessment units in district general hospitals built during the next period of the building programme after 1972.

DR. W.T. THOM, Medical Officer, Scottish Home and Health Department, explained that in the past there had been a tendency to regard age in itself as a disease, so that it was right and proper for elderly persons, who were unable to care for themselves or arrange for attention, to be admitted to an institution providing basic care, and which at the same time removed the patient from society's embarrassed gaze. Partly due to the change in attitude of the public, however, and the considerable efforts of a small number of doctors, geriatric medicine had made a considerable advance in recent years. The basic concept of geriatric medicine was not that people were disabled because they were old but that they might be sick and disabled as well as aged. A true geriatric service should be designed to provide help and assistance which would enable the elderly members of the community to live independent or supported lives at home if at all possible and only when that failed, to give institutional or terminal care. The hospital's responsibility in this service was an important one and required certain facilities for diagnosis and assessment, therapeutic services including rehabilitation to fit the patient for return to the community, and caring or supporting services for those who required long-term medical and nursing care. It was accepted policy that geriatric assessment units would be provided at all district general hospitals. To maintain a steady turnover of patients, a sufficiency of supporting beds for long-stay patients should also be provided.

Emerging from the original assessment ward built at the Victoria Hospital, Kirkcaldy, a design of a geriatric ward unit now referred to as 'The Cameron Plan' had been provided at Cameron, Lightburn, Drumchapel, Southern General and Canniesburn hospitals. Although all these schemes were basically the same, the wards were being used in the different situations to provide accommodation for admission, assessment, rehabilitation and long-stay chronic patients. From a study of these wards, it was decided that the basic requirements of a geriatric unit having modern facilities could be identified and the differences to those of an acute general ward set out.

Although some facilities for intensive nursing care would be required in the geriatric admission unit, from the study it appeared that in a 30-bed unit, 6 fully equipped single rooms would meet the needs for isolation, privacy, intensive and terminal care. In place of a central intensive care unit as in the standard acute ward, priority was given to the provision of space for rehabilitation and mobilisation. This would facilitate activation and rehabilitation with a view to discharge home. Dr. Thom noted that from the group study it had been found that 85% of patients in assessment units and 95% of patients in long-stay wards were not bedfast. It became clear, therefore, that a basic essential for a modern geriatric assessment unit was space at the bedside for the first steps in rehabilitation and an area situated centrally on the ward where intensive physiotherapy, occupational therapy, aids for daily living and all the other therapeutic processes required for full rehabilitation and periodic reassessment could be carried out. This area, which would be sited in the space accommodating the intensive care unit in the acute ward plan, would function as a day activity area for in-patients and not as a day hospital at ward level. As there was a considerable degree of individuality in the approach of clinicians and other staff in geriatric medicine towards the process of rehabilitation, it was essential to provide space capable of being used in different ways. A multi-disciplinary approach to rehabilitation, closely integrating the nursing, physiotherapy and occupational therapy departments, enabled all categories of staff to become fully conversant with the patient's overall progress, to understand the patient's limitations in the different fields and to become very closely involved in the patient's complete progress towards health. In some units, although there was recognition of the benefits of this approach, architectural limitations inhibited its adoption.

In the organisation and management of any ward unit efficiency of medical and nursing treatment was of cardinal importance but, in geriatric medicine where many of the patients had rather a slight hold of their independence and individuality, it was of particular importance to use every facet of design to preserve and enhance the patient's own personality. Although on many occasions the working group had been advised that acute and long-stay geriatric patients required different levels of accommodation, Dr. Thom noted that further investigation had indicated that although certain accommodation provided might be put to somewhat different uses, the basic architectural requirements for both types of patient were remarkably similar. These requirements included:-

(1) Full facilities for the practice of modern medicine although the intensity of use and requirement might vary.

(2) Several day areas, which in the case of a geriatric unit, required to be of different kinds in order to cater for the varied needs and therapeutic requirements of patients.

(3) Facilities for rehabilitation in the case of short-term patients and activation for long-term patients.

(4) Carefully considered sanitary facilities.

(5) Space to move and turn easily but without long distances between patient areas.

(6) A level of observation which permitted close unobtrusive supervision while at the same time providing a satisfactory degree of privacy for the patient.

(7) Visual contact with the activity of people in the outside world. (Trees were not enough - they grew too slowly!)

As the assessment unit served as the hub of the area geriatric service, accommodation was required to serve as the administrative centre for doctors, social workers and other members of the unit team. Room was required for multi-disciplinary meetings to enable regular case conferences to be held at which the whole medico-social picture of each patient could be reviewed before the appropriate action was taken by the community and hospital services. Maximum flexibility in the use of these rooms was essential and, if there was a day hospital adjacent to the geriatric assessment unit, several of the functions presently placed at ward level would be transposed.

It was stressed that the group had not produced the ideal plan for the ideal geriatric ward in the ideal situation but it was suggested that what had been proposed was a very good functional compromise which might find a place within a Scottish budget.

MISS E.K. McNAUGHT, Nursing Officer, Scottish Home and Health Department, outlined the work undertaken by the multi-professional team concerned with the detailed study of ward functions which had resulted in the publication of the Scottish Home and Health Department's Planning Note on Ward Design. In setting about the task of defining the functional needs of ward units, there were found to be many conflicting requirements and limiting factors in existing situations which had to be taken into account in the planning of new units. From the wide variety of plans available, it was evident that planning authorities were, in general, not clear about the functional requirements of a ward and many decisions were being taken according to strength of opinion rather than as a result of detailed study of ward situations. It was, therefore, felt desirable that planning committees should be furnished with sound advice on the principles of planning ward units and, as a first stage, it was decided that ward functions should be identified and defined before any attempt was made to set down any planning requirements. Basic functions remained substantially the same whatever the age group, sex or degree of care required by individual patients and facilities appropriate for these functions had to be provided in every ward design. They were identified as:-

(1) A suitable environment for the protection and care of patients with facilities for their basic human needs including shelter, heating, lighting, ventilation, bedding, linen, toileting, provision and distribution of food, fluids, and other supplies, the removal of used items and disposal of waste products.

(2) Provision for diagnosis and treatment.

(3) Facilities for the giving of nursing and medical care.

(4) Provision for the reception and discharge of patients.

(5) Facilities and arrangements for relatives.

(6) Provision, where necessary, for clinical teaching.

(7) To provide for these as economically as possible in terms of capital and running costs.

Having identified the basic factors relating to ward design, the study team then had to determine how best they could be met allowing for such matters as changes in procedures, methods or policies which might come into operation in the future and necessitate change in use of accommodation, the need to cater for a more sophisticated public, changes in supply methods and disposal arrangements which were already taking place, and the need to make the best use of scarce professional time. It was recognised that, although suitable provision had to be made to facilitate the work of doctors, the design and arrangement of rooms in ward units more directly affected the work of nurses. Accordingly detailed 24-hour studies of their work in wards were undertaken. The information collected was carefully analysed in the light of the functions which had been defined, priorities assessed and the best balance of interests obtained.

Miss McNaught augmented her talk with a series of slides illustrating how the planning principles for ward units had been developed. Examples were shown of ward units of unsatisfactory design and equipment including inadequate bed spacing, poor or non-existent facilities for patient recreation, lack of privacy on the one hand and nurse/patient observation on the other and inadequate dining and day accommodation and storage areas for clothing. String diagrams illustrated nurse ward journeys and analyses of nursing procedures and the location of patients by degrees of nurse dependency were explained. From the data collected, the 60-bed Falkirk ward plan had been developed.

Basic planning principles applicable to any ward unit included:

the grouping of patients according to their need for observation, privacy, isolation, segregation and nursing care;

the sub-division of patient areas compatible with their requirements of nursing care, the availability of staff and the need to provide for maximum bed occupancy;

the grouping of facilities for patients' comfort and care, taking into account the need for flexibility in use, (this involved considering sanitary facilities, sitting areas, and treatment room);

the provision of accommodation, which reflected the basic cycle of nursing work, i.e. read, prepare, do, record, dispose;

the grouping of nurse-working rooms in the most suitable location for the patient areas which they served;

the centralisation of all items of equipment for the care of patients;

and the centralisation of collection points for items for disposal.

MISS E.A. REID, Nursing Officer, Scottish Hospital Centre, spoke of the study being carried out on the design requirements and equipment for a room set aside solely for the cleansing of the ambulant incontinent patient. As with other room evaluation studies at the Centre, a mock-up had been prepared taking into account background information and data collected from a review of literature and discussions with nursing staff. Although the literature on incontinence provided information on control and management from the clinical viewpoint, little guidance was available in the nursing textbooks or procedure manuals on the more practical aspects of the cleaning up of the ambulant patient and types of material to be used. It did appear that, as dealing with incontinence came under the direct control of individual ward sisters, the procedure adopted depended on her individual likes, dislikes and expertise, and, indeed in three wards visited in the same hospital it was found that not only a different procedure but entirely different materials were being used for the same purpose.

In the course of the study, 19 psychiatric, mental deficiency and geriatric hospitals of varying ages had been visited and although all the older hospitals had been upgraded, no area had been set aside solely for the cleaning up of the patient who was incontinent. The hospitals all coped very well with their ambulant incontinent patients and, although the older units were not designed for the large number of ambulant patients now present on the wards, the nursing staff had adapted their procedures to fit in with the existing situations. The incidence of incontinence varied - one 57-bed ward having only 13 continent patients while in other units incontinence was regarded as accidental and taken as failure of anticipation on the part of nursing staff. All of the hospitals visited made efforts to toilet train and toilet their patients frequently and, while some kept records of incontinence, others did not.

Patients were changed either in the bed area, lavatory, sluice or bathroom, and, although nursing staff were acutely aware of the sensitivity of patients to incontinence, the main problem was the lack of privacy essential to maintain personal dignity. If the patient was taken to his own bed or a quiet area on the ward floor and had his bed screened to ensure visual privacy, no auditory privacy was possible and one could not cut down the smell. In many of the older hospitals the lavatories were incapable of taking a sani-chair and only with difficulty could a nurse squeeze in beside the patient. In these units and also in some newer hospitals lack of running water in the lavatories necessitated the nurse leaving the patient unattended usually in an unclosed W.C. compartment and this aggravated the problem of maintaining privacy. As doors were rarely provided on sluices and it was undesirable that patients should be asked to hold on to the rim of the sluice sink while being sponged down, their use for patient cleansing was indefensible.

Although the bathroom was by far the most suitable area for the procedure to be carried out, there were difficulties mainly relating to types of equipment. It was, in fact, questionable whether it was right to bath a soiled patient in standing water in the same bath that other patients were likely to use, and the recent suggestion of lining the bath with polythene merited consideration. The main difficulty in cleaning a soiled patient in a shower compartment was caused by the inadequate facilities for waste disposal and it was noted that in some situations this problem was approached by placing on the floor a newspaper which could be easily wrapped and removed.

The range of equipment and materials used by nursing staff was wide. The non-fixed equipment included a trolley, disposal bucket, clean linen,

soiled linen rounders, patient's personal clothing and mop and pail, and the different locations of these items on the ward together with a tendency to site day areas distant from the sanitary facilities increased the distances the nurses were required to walk and consequently the time it took to undertake the procedure. The first task in cleaning an incontinent patient was the removal of clothing and, in general, the design, supply, laundering and maintenance of clothing for the long-stay patient were not conducive to this procedure. As chairs were not normally provided with removeable arms, it was virtually impossible at times to attend patients who were large and sitting very solidly. Patients who were completely immobilised were normally placed in a patient hoist which might require the attention of up to three nurses.

The materials used for cleaning varied enormously including some 20 different types of cleansing agents and the full range of disposable materials produced by at least 7 manufacturers. Although many hospitals had an overall policy for the types of material used, in other units nurses were completely unaware of the range of disposable incontinence material available and relied on nursing journals or individual representatives of firms for their information. Many hospitals used protective clothing and some method of containing urine and faeces. Although some units provided plastic pants, by far the most common material in use was the incontinence sheet. These were used in a variety of ways frequently requiring adaptation and there was no doubt that there was considerable scope for improvement in this field.

It was from this point that the development of the design of a cleansing room of 160 sq. ft. with the right equipment and environmental factors (particularly warmth and privacy) took shape. The potential users of this room were classified as fully ambulant, ambulant with assistance (either a nurse, mechanical aid or both), and chairbound patients; it was recognised that incontinence could be either urinary or faecal, minimal or gross and that the patient might be aware of his surroundings or completely confused.

The fixed equipment in the room was reduced to two main items. The first was a modified bidet-cum-W.C. with a hand-held spray attachment. A support was available on either side with an additional support placed at mid-chest height for those patients who could not grasp with their hands but who could lean on their arms. The bidet could be used as a lavatory but it would also serve to wash those patients not grossly contaminated, using a specially designed portable seat. The second item was a newly developed washing couch, also with a hand-held spray. The couch would be placed at wheelchair height to enable the easy transfer of patients and be capable of adjustment to nursing height, the platform being slightly contoured with a central disposal outlet. The sides would be detachable giving security to the patient and protection to the nurse. These items were at an interim stage of development and other items of equipment were being considered but it was likely that the study would suggest a radical departure from the equipment used in hospital at present for this procedure.

Other equipment required in this area included two 18" x 18" trolleys for clean clothing and disposable items, a disposal rounder and a bin, a sink, a chair and a mirror.

Miss Reid noted in conclusion that the survey was conducted to establish requirements for future planning but it was hoped that the work would be of benefit to existing hospitals. For too long nursing staff had accepted hospital buildings and equipment which they had been given, and taken pride - possibly false - in adapting their procedures to meet the existing

situation. It was to be hoped that in the future the right equipment in the right place would be available for the work to be undertaken.

MISS D. NORTON, Nursing Officer, Scottish Home and Health Department, spoke as a member of the Departmental working group and from experience in the carrying out of previous studies of practical nursing problems in the field of geriatrics. She had been impressed by the way this study had led her to recognise and abandon some preconceptions on the subject. Accepting the principles tested in the Falkirk Ward, the problem facing the study team was to identify the variations required in the acute ward plan to meet the needs of a geriatric assessment/rehabilitation unit. In terms of basic services, no alteration was necessary; the only difference being in emphasis. For example, as 50% of the patients in a geriatric unit could be expected to have some level of incontinence, the volume of soiled laundry or disposable incontinence pads would certainly be greater indicating that a more frequent collection of soiled items, rather than an enlargement of the storage area, was necessary.

Although it was not the remit of the group to consider the needs of long-stay wards, the study of eleven wards in four hospitals included taking a census of all patients. Nothing was found to distinguish the basic needs of patients in the 'acute' geriatric wards from those in the long-stay units. The differences were essentially those of treatment arising out of the presence in the 'acute' ward of patients who might recover sufficiently to be discharged from hospital. All geriatric wards over a period of time would have patients in the four groups of bedfast, chair-bound, ambulant with assistance and fully ambulant, and although the numbers in these groups would fluctuate, the groups themselves were constant factors and governed the planning of geriatric wards irrespective of whether they were designated 'acute' or long-stay.

In terms of actual provision, while the general ward floor in the standard plan had a complement of 72 beds, the geriatric assessment unit would consist of 60 beds, made up of 2 x 30-bedded sections, each having four units of 6 beds plus six single rooms. It was not intended that the single rooms would be confined to seriously ill patients, the anti-social and the dying; they should also be occupied by patients soon to be discharged in order to give experience of self-care. With this in mind, it was advocated that at least four of the six single rooms should be provided with their own W.C. and wash-hand basin. Apart from the increase of flexibility in use between the sexes, six single rooms provided a reasonable number for a delegated responsibility from the nursing management viewpoint.

There was no reason to suggest that the 6-bedded units should be of any different size from that of the standard ward for, although it was likely that between 85% and 95% of the patients would be up and out of the bed areas during the day, there would always be occasions when a day space for quiet seclusion was required and free floor space was also important in the early stages of rehabilitation.

As old people tended to "follow my leader" when it came to deciding when to visit the W.C., it was considered more practical to have two W.C.s available to 12 beds rather than one available to 6 beds. Also, on the grounds that the elderly should not take a shower unattended or un-assisted, no showers were advocated in relation to the 6-bed units; this left room for the increased circulation space necessary for geriatric patients. Two W.C. pedestals were located slightly off centre to accommo-date patients with hemiplegia and in both there was sufficient area for an

attendant to stand while the patient had support from the wall on the opposite side. For the unaccompanied patient, a removeable support on the open side was suggested.

Although it might have been desirable to provide more wash-hand basins in these sanitary areas, this had lower priority and it was assumed that most elderly patients would continue to have washing facilities brought to their bedside. Three hygiene areas were proposed in each 30-bedded section - one with a bath and W.C., one with a shower and W.C., and an entirely new concept of an incontinence cleansing room, the requirements for which were being studied by the Scottish Hospital Centre. As space in the ward was at a premium and the proposed cleansing area would contain facilities for giving the types of treatment more commonly required by the geriatric patient, it was considered that it would probably not be necessary to provide a treatment room as such in the assessment unit.

Another major deviation from the standard ward plan was an extension of the traditional day room concept; this took the form of several interrelated rooms combining to make a day activity centre serving all 60 patients. As patients required a place to sit, it was suggested that there should be a large and a small sitting area to serve each 30-bed unit, recognising the importance of making it possible to group patients according to their needs or preferences. Although at present day areas usually served as dining rooms and the heavy work imposed upon staff in moving patients was recognised, it was nevertheless considered that for geriatric patients in particular, going to a dining room was a therapeutic process and served as part of their rehabilitative programme. It was estimated that half of the patients in the day activity centre would be capable of walking, possibly with assistance, to a dining area. The upright chairs and tables in such an area lent themselves readily to other activities relating to occupational therapy. It was, therefore, recommended that a dining area which could be used for other purposes when not required for meals should be provided to serve each 30-bedded ward area. Six W.C.s were related to the combined day activity centre. By study it had been ascertained that W.C.s should be sited within a 40 ft. radius of this area and preferably not further than 30 ft. from where patients were seated.

Facilities for physiotherapy and occupational therapy were also located in the day activity centre. No one pattern of operating either service in geriatric wards had come to light, the service provided usually depending on the number of staff available, existing buildings and personal preferences. As it was likely that both services would increasingly work closer together, flexibility in use was the paramount feature and space was accordingly provided to be detailed, developed and used as appropriate to local circumstances. Office facilities for physiotherapists and occupational therapists would be located elsewhere in the hospital and it was envisaged that storage for materials would be on a "topping-up" basis from a large central store.

As the assessment unit served as the hub of the hospital geriatric service, office accommodation was provided for staff with storage space for records and a room for multi-disciplinary meetings and interviews.

MR. R.M. ROBERTSON, Architect, Scottish Development Department, stressed at the outset that the working group had not produced a standard geriatric ward plan nor compiled a schedule of accommodation for a geriatric ward. The object was to identify planning requirements which were different in a geriatric situation from those obtaining in the acute ward. By considering broad principles, it was hoped that the outcome of the study would be capable of application in a wider field than the new district general

hospitals; the findings should equally be capable of being applied to any new geriatric accommodation including long-stay and, perhaps just as important, to the upgrading of existing buildings.

There were many sound reasons for the development of standardisation in hospital building, and it was particularly appropriate at the present time in view of the imminent change to metric measurement. It was unlikely that the building trade would be able to satisfy the demands made on it in the future if it continued to rely on existing traditional methods of planning and building. To take advantage of advances in building techniques and materials, it would be desirable as far as possible, to apply a factory assembly line approach with industrial production methods, and it was essential that the number of variants from the standard was reduced as much as possible. The hospital service should avail itself of the advantages of modular methods in planning and be able to draw upon building component supplies which would be available when a dimensionally co-ordinated component system was accepted nationally. In England, the Central Department had produced a "Compendium of hospital building assemblies" in imperial measurement and work was at present in hand to convert this to the metric system. In Scotland, in association with Hospital Boards and private architects, the Scottish Development Department had been working to produce a standard ward plan using the CLASP system of industrialised building. For comparison purposes a parallel exercise was carried out by the same team using the Compendium components as a basis. From these systems, two possible proposals for a standard plan for a geriatric unit, applying the principles and recommendations outlined by the study team, had been prepared.

In practice it had been found that the standard acute ward presented no great difficulty in conversion and every effort had been made to retain as much as possible of the original layout and to avoid providing services such as water, drainage, electricity at points in the geriatric ward where none was provided in the acute unit. With the aid of slides, Mr. Robertson then outlined the proposals made by the team and described in detail the suggested layouts for the geriatric assessment ward. The geriatric ward featured the same nurse-working rooms as in the acute ward and the beds were similarly disposed in 4 x 6-bedded rooms and 6 single rooms but with modified sanitary facilities giving larger W.C. compartments. In place of the intensive nursing care area featured in the 72-bed acute ward plan, there was a 1,400 sq.ft. area for day activity. This area had not been designed in detail on the plan presented to the conference as it was intended that it could be developed in a variety of ways to suit specific needs in each case. Office accommodation similarly could be allocated to suit local requirements. Plans of the CLASP feasibility study acute ward plan and the notional adaptation for geriatric patients are shown in appendices to this report.

DISCUSSION

Opening the general discussion, DR. J. CRORIE, Consultant Physician in Geriatric Medicine, Cleland Hospital, paid tribute to the detailed study which had been carried out by the working group and noted with satisfaction that the principle of incorporating a geriatric assessment unit in the district general hospital had been accepted by the Department. If such a unit was to function satisfactorily, however, careful consideration would require to be given to the type of patient accepted for admission. There was considerable pressure at the moment on existing

assessment units particularly in district hospitals to admit patients, either directly or by transfer from other wards, on the basis of age rather than disease. It was Dr. Crorie's view that, if this was permitted, the function of the unit would inevitably change. Patients who were acutely ill and in need of intensive treatment should, irrespective of age, be accommodated in acute wards. As much of the building at present available for geriatric patients would require to remain in use for some considerable time, great importance should be attached to improving facilities and techniques for the care of all types of geriatric patient. In this context, the study relating to incontinence was particularly relevant.

In the subsequent discussion, the following were the main points to emerge:-

(1) Admission policy

Discussion took place on the implications of various admission policies insofar as the geriatric assessment unit was concerned. The need for a defined policy for all patients admitted to a district general hospital was confirmed, and the point made that hospital facilities such as intensive therapy should be available to patients in need whatever their age. What the study team had shown was that the standard acute ward plan could readily be adapted to the needs of geriatric assessment patients.

(2) Toilet accommodation

The provision of satisfactory and sufficient toilet accommodation was of particular importance in the geriatric situation. It was also felt that as many similar types of patient were admitted to acute medical as well as assessment wards, the acute units should also be fitted with items of equipment, such as ceiling to floor handrails, specially designed for the elderly and disabled patient.

(3) Building programme

It was noted that while the research work which had gone into the design of the Falkirk Ward had proved of considerable interest, the particular value of the project lay in the practical reality of the construction of the unit and consequent evaluation. Although it was noted that the Department hoped to produce a hospital building using industrialised methods, it was not proposed that in the immediate future, a trial geriatric unit should be erected; the district general hospitals which were planned to be built after 1972 would incorporate such developments.

(4) Use of day activity centre

It was pointed out that it was not uncommon for occupational therapy activities to be undertaken in accommodation insufficiently large for the purpose. Very often occupational therapists had to adapt their programme of work to fit in with their surroundings and as the position varied between hospitals, it was difficult to specify a general pattern of work. It was, therefore, preferable not to detail the requirements but rather to provide the space in which a variety of work could be undertaken. Similarly for physiotherapy, adequate space equipped with simple apparatus including parallel and wall bars, staircase and perhaps a bed, was required where progressive treatment of geriatric assessment patients could be undertaken.

It was stressed that team-work was of paramount importance and benefits could be gained by seconding nursing staff to physiotherapy and occupational therapy departments; the sharing of skills could assist continuity of care.

It was noted that only limited supplies of equipment for these services would be kept at ward level, bulk stores being maintained centrally elsewhere in the hospital building. Mention was made of the shortage of trained physiotherapists and there was general agreement that an improvement in status of these professions would go some considerable way to alleviating the situation.

(5) Dining area

As the provision of a homely dining room atmosphere was considered of particular importance for the elderly, a special plea was made for the dining room to be kept as such and not used for other purposes when not required for meals. It was noted, however, that since many geriatric patients used over-chair tables and new units would probably be provided with plated meals, the use of set tables for eating was liable to decrease. The inclusion of a separate area on the ward for dining would increase the capital cost of the building and this would be difficult to justify if used solely for dining.

(6) W.C. doors

The question of the most satisfactory design for W.C. doors in a geriatric unit was raised and, although this was a continual source of discussion in the design of new units, it was noted that the subject had been extensively studied and recommendations were outlined in the Scottish Home and Health Department Ward Planning Note and supplement.

(7) Fire precautions

The importance of guarding against the hazard of fire in the design and equipment of a geriatric ward was particularly emphasised. Although this facet had not been specifically studied by the working group, it was indicated that the feasibility study team had considered the acceptability of the standard plan with regard to fire regulations. It was also noted that the two Central health departments in conjunction with the hospital service had set up a working party to investigate the flammability of fabrics and other materials used in hospitals and, although the result of this investigation would not be known for some time, hospital authorities would be informed of the outcome in due course.

(8) Treatment area

The value of a treatment area in reducing the level of cross infection and consequently the length of stay in a geriatric assessment unit was pointed out. From the study of geriatric wards, however, it had been ascertained that by far the majority of treatments were given at the patient's bedside; even in an acute ward to justify this room, which was large and expensive to provide, it had to be used for admission procedures,

assessment and examination of patients and for health education and advice. As the total ward area available was limited, priority had been given to including a patient's cleansing area.

(9) Use of hoists

Conflicting opinions were expressed as to the value of hoists in transporting patients. On the one hand it was suggested that it was preferable for them not to be used in bathrooms as it was easier for a patient to be lifted from a chair or slid from a trolley. On the other hand, with the increasing availability of rigid lifting devices, it was advocated that hoists should be used wherever possible although it was noted that the provision of sling-type hoists in hospitals was diminishing.

(10) Cost

Although no detailed cost of the suggested designs for the assessment unit was available, it was noted that this was being investigated as part of the feasibility study. In any event it was anticipated that the assessment unit would be less expensive than a standard acute ward.

(11) Provision of supporting services

Doubt was expressed as to whether all the services required for a geriatric patient including admission procedures, investigation, treatment and rehabilitation could be satisfactorily performed on a ward of the suggested size. As many patients were going to require intensive rehabilitation, possibly over a period of three to four months, the turnover of patients would be consequently reduced. It was envisaged, however, that backing-up units to serve the geriatric service as a whole would be provided for long-term cases who required extended rehabilitative treatment.

(12) Incontinence

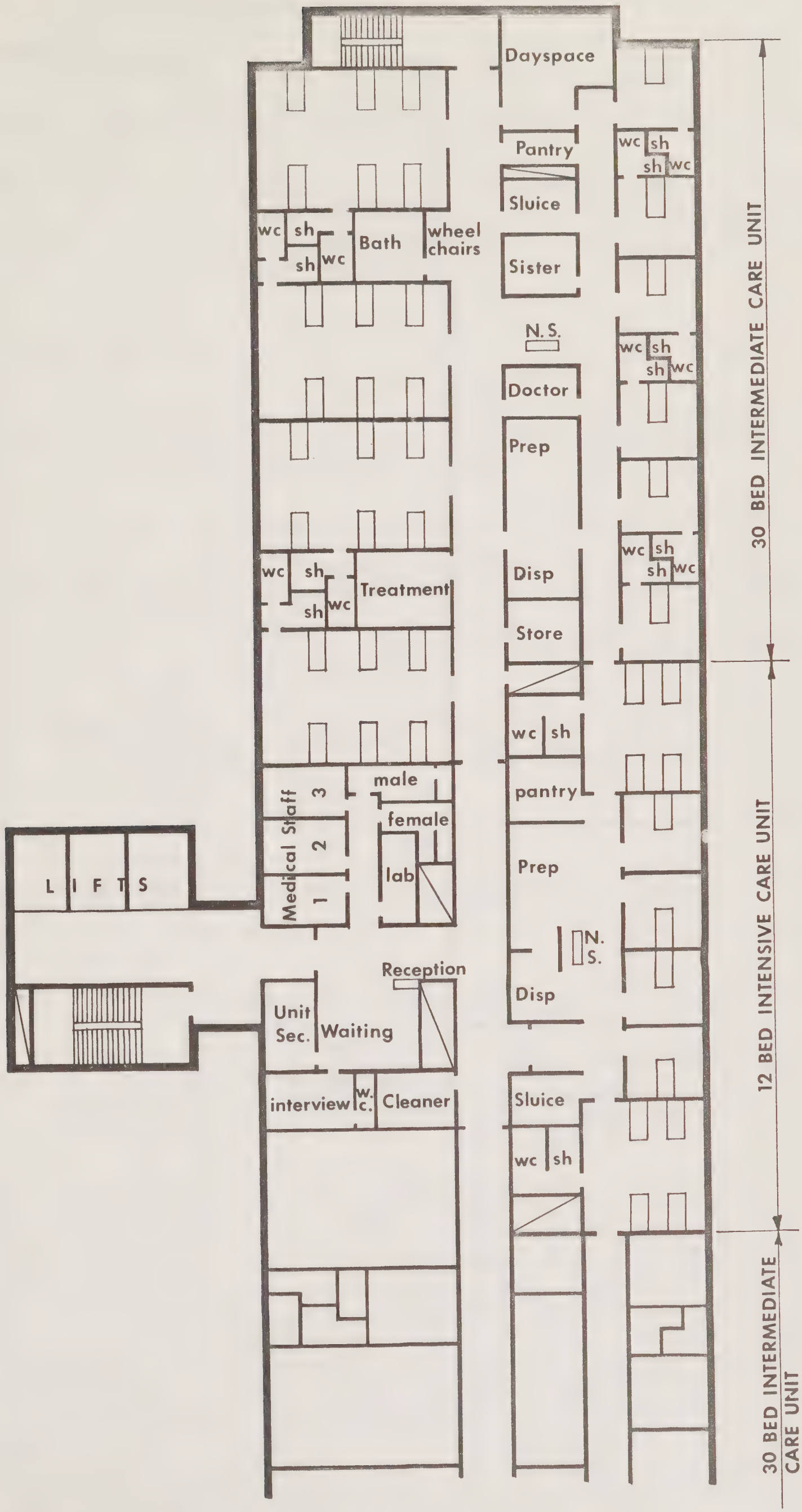
It was argued that stronger emphasis should be placed on the preventive aspects of incontinence. If more attention were paid to this, the level of incontinence in hospitals could be much reduced. Considerable savings would be made in the provision of toilet facilities, furniture and equipment, and above all, in staff time. The problem of incontinence was, in many instances, influenced by the patient's state of mind and the distance from sanitary facilities and it was desirable that nurses should be constantly aware of the need to encourage patients to improve. It was accepted, however, that the problem of the soiled patient would remain and merited study. Without doubt existing equipment and facilities in hospitals were frequently quite inadequate.

(13) Conclusion

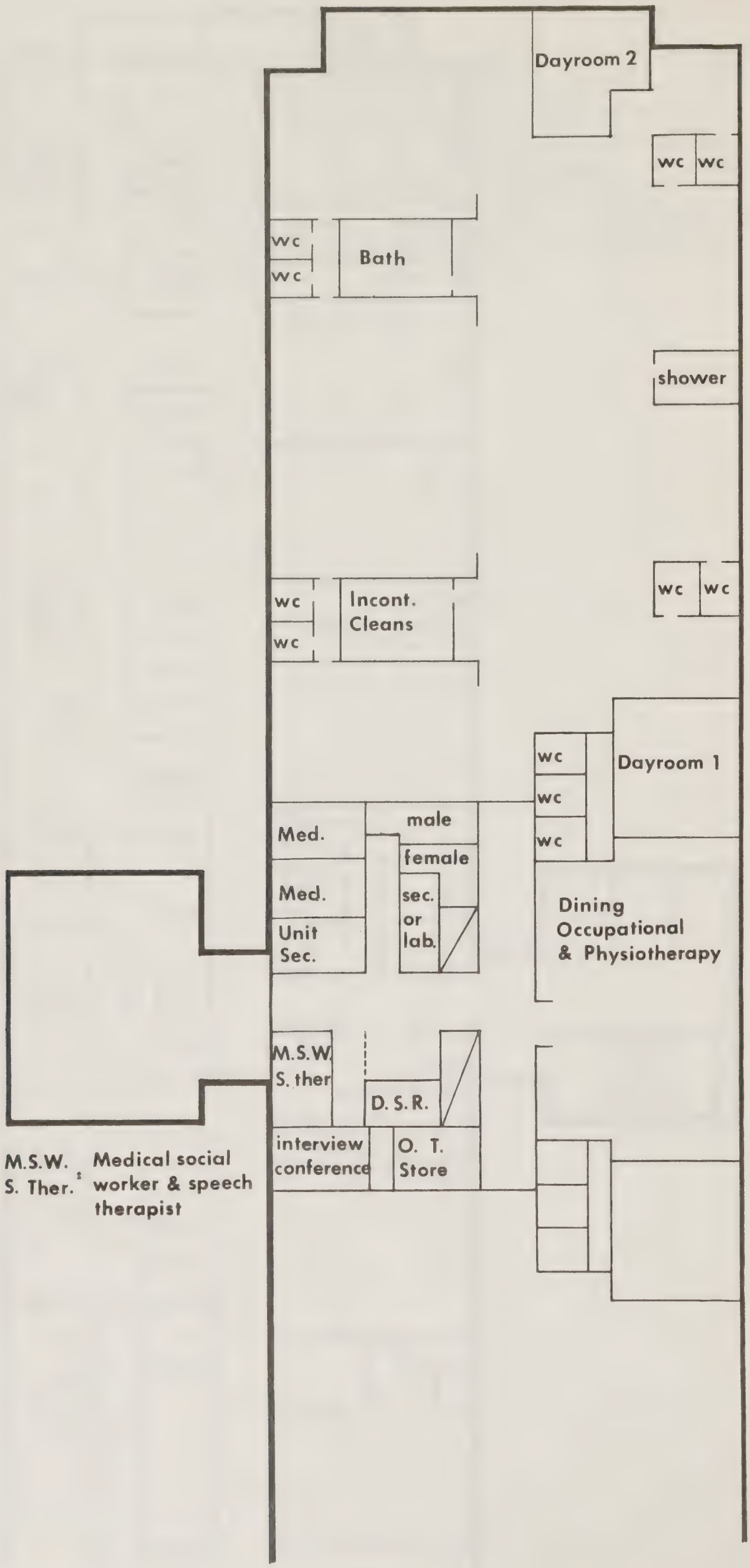
The conference offered the study team the opportunity to present their findings to a representative cross-section of those concerned with different aspects of the care of geriatric patients. In general their practical approach to the subject and the versatility of their proposals were welcomed; any doubts centred round admission policy, relationship with acute facilities, the availability of adequate supporting beds and the extent to which the as yet undetailed day activity area would measure up to requirements.

Scottish Hospital Centre
February, 1970.

STANDARD ACUTE WARD PLAN



NOTIONAL ADAPTATION FOR GERIATRIC ASSESSMENT PATIENTS



Provision for children in hospital

Meeting at the Scottish Hospital Centre on Friday, 3rd April, 1970.

Implementation of the recommendations of the Platt report (1959) has been slow. This conference examined the present position and future trends in specialist care of children. There was a special account of the planning of the new Yorkhill Hospital.

MR. G.G. SAVAGE took the Chair.

PROFESSOR J.H. HUTCHISON, Department of Child Health, University of Glasgow, recalled some of the more fundamental recommendations of the Platt Report published in 1959,* as follows:-

(1) Children and adolescents should not be nursed in adult wards.

(2) Children should be nursed in company with other children of the same age group, and they should have facilities for inside and outside play.

(3) A children's physician should have a general concern with the care of all children in hospital.

(4) The sister in charge of the ward should be R.S.C.N. as well as S.R.N. (R.G.N. in Scotland). The child should be able to get to know his own nurse. Nursery nurses can help with children under five.

(5) Social workers and occupational therapists have a valuable contribution to make.

(6) There should be facilities for unrestricted visiting by parents.

(7) There is much to be said for admission of mothers along with their children.

(8) The change in the role of the infectious diseases hospital demands that it should have a nucleus of nursing staff with special training in the care of children and that a paediatrician should be associated with the children's medical care. This latter should take the form of regular sessions at the infectious diseases hospital.

Professor Hutchison went on to describe the present position in the Western Region of Scotland and gave figures relating to the period immediately before the Royal Hospital for Sick Children had to be evacuated from its Yorkhill site to Oakbank where, for the past four years, approximately 100 fewer beds had been in use. No new paediatric units had been opened in Glasgow and the present position was clearly less satisfactory than it had been five years before. The new Yorkhill hospital would have between 40 and 50 cots more than its predecessor and this was unlikely to make a very substantial impact on the overall figures although free admission of mothers with their children would be possible.

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* Ministry of Health. Central health services council. The welfare of children in hospital: report of the committee: /chairman: Sir Harry Platt/. London, H.M.S.O., 1959.

In the year 1965, 16,875 children under the age of five years were admitted to Glasgow hospitals from the Western Region. Of these, only 7,982 (47%) were admitted to paediatric units under the care of paediatricians. Of the children under the age of five years admitted from the Glasgow area, the total was 12,445 and of these only 5,066 (41%) were admitted under the care of paediatricians. While in addition many children were admitted to the paediatric units in Stirlingshire, Renfrewshire, Lanarkshire and Ayrshire, the Glasgow figures could hardly be regarded with much satisfaction twelve years after the Platt Report. Indeed, a larger number of children were admitted to the Glasgow infectious diseases hospitals (3,916) than to the Royal Hospital for Sick Children (3,250). There were no paediatricians with regular contract sessions in the infectious diseases hospitals nor were there any in such large general hospitals as the Royal Infirmary (469) and the Victoria Infirmary (547) which regularly admitted children not infrequently to open adult wards. While paediatricians visited children in these hospitals on request, this could hardly be regarded as "having a general concern with the care of all children in hospital".

Insofar as the mentally defective were concerned, in the Western Region of Scotland paediatricians had no regular sessions at mental deficiency hospitals and indeed had almost no contact at all with the mental deficiency service. Professor Hutchison questioned whether children should be accommodated in these hospitals. Paediatricians were already fully extended with a heavy load of patient care, under-graduate and post-graduate teaching, and efforts to increase the number of paediatricians in the region had been concentrated to date on trying to end the indefensible situation of the single-handed paediatrician in the country areas, a limited objective not yet completely achieved.

With regard to nurses, paediatric hospitals and units had been fortunate in having had trained and student Registered Sick Children's Nurses. It was now possible that the three years training leading to registration as R.S.C.N. would be abolished and the comprehensive general training now recommended by the General Nursing Council for Scotland widely introduced. Pupil nurses would spend only a few weeks in the children's hospital and would no longer be fully committed to the nursing care of children. There would be little hope of the child "getting to know his nurse" and while a basic staff of trained children's nurses who would have done a course of post-certificate training leading to the R.S.C.N. would remain, the length of this post-certificate course was uncertain, as was the number of R.G.N.s who would undertake it. Professor Hutchison expressed his fear about the future nursing of child patients. It was doubtful if the close collaboration and team-work which now existed between paediatricians and their nursing colleagues, and the involvement of parents brought about by unrestricted visiting, could continue in a ward where nurses were always changing. It was also doubtful if the limited training could make a nurse efficient in the highly specialised techniques employed in modern paediatric units of today.

There had been many medical advances since 1958. Care of the newborn had improved out of all recognition and there were signs of considerable improvement of results in the treatment of malignant disease. An increasing number of children with congenital heart defects and other congenital anomalies could now be given a normal active life and it was possible to prevent infants with phenylketonuria, galactosaemia, homocystinuria and other inborn errors of metabolism from becoming mentally defective. While criticism had been made of lack of vision on the part of senior medical and nursing administrators in not providing adequate facilities for children in hospital, clinicians had been too

hospital orientated and had paid too little attention to Platt's recommendations that "children should not be admitted to hospital if it can possibly be avoided". Insufficient attention had been paid to the emotional and mental needs of children, both in and outside the hospital. While children with multiple handicaps now survived who in the past would have died, insufficient had been done to assess the full extent of their residual disabilities so that their special needs could be planned and met. Indeed, many paediatricians lacked the skills in child growth and development needed to make a really accurate assessment of the handicapped child. Their training had been primarily in the management of disease and they had been content to work in hospitals with but little contact with the doctors of the local authorities whose primary job was to keep the child healthy.

More recent concepts and attitudes affecting paediatric care were aimed at correcting these deficiencies. Increasing concern with children who were physically or mentally handicapped had led to the realisation that it was outside the hospital that the problems of these children required to be met. Their solution involved the family doctor, the local authority doctor and the hospital doctor, in addition to others such as the social worker, the health visitor and the educationist, and the ability of any of these types of professional workers in the field of assessment varied greatly from the good to the very poor.

The new type of Community Paediatrician should be hospital based but would have received special training in the physiology of growth and development in the assessment of mental and sensory functions and in the screening procedures for physical and metabolic defects. His tasks would include some work in the hospital team and would include supervision of the baby, pre-school and school child, both well and handicapped. With the coming of the unified structure under Area Health Boards, he would more easily work partly in what is at present the local authority service. Some of these community paediatricians might come initially from suitably qualified members of the local authority medical services. What was of vital importance was that their future salary and status must depend upon clinical excellence as had been the case with the hospital system.

The Comprehensive Assessment Centre had the approval of the Central Departments. It should be attached to the central or district hospital where skills and equipment necessary for the assessment of the child with multiple handicaps could be found and where the child and his parents would receive personal and continuous attention and assessment under the paediatrician in charge whether community paediatrician in the district hospital or paediatric neurologist in the main regional paediatric hospital. It was clear that major increases in staff and facilities, both medical and ancillary, would be necessary.

The Child Psychiatric Services were sadly inadequate throughout the country. The few good centres were swamped with demands for help and there was little opportunity for research. There was a need for recruits of adequate calibre and it was Professor Hutchison's opinion that the insistence that the trainee child psychiatrist should have wide basic training in adult psychiatry had been at the expense of his having a proper basic training in paediatrics. Indeed, the child psychiatrist who had not been trained in basic paediatrics was of no help to the paediatrician and would not command his respect. Child psychiatry was a specialty of first line importance; in order to secure recruits of high calibre and train them adequately, a properly equipped and staffed university department of child psychiatry was urgently required, headed

by a man or woman of professorial rank.

Many but by no means all of the inadequacies of the paediatric service were attributable to lack of funds. We did ourselves a disservice if we failed to face the situation frankly and honestly.

DR. P. MACARTHUR, Consultant Paediatrician, Raigmore Hospital, Inverness, compared the care of sick children in sparsely populated areas with that in the big towns and cities of Scotland. For the 100 years up to the end of the last war, the former had been enormously better than the latter; this was borne out by the much lower mortality of children in the country districts. In the past 25 years, however, there had been a really dramatic expansion and improvement in child care in cities so that today infant mortality was similar in both groups. This transformation had been achieved by making the complexities of modern diagnosis and treatment readily available to all sick children through prompt transportation and highly organised specialist medical and nursing services and by improving standards of housing and living in the cities without such improvements in the rural areas.

While some of the more highly specialised skills in neurology, cardiology and endocrinology, could be found in only one or two hospitals in the country, there was no disadvantage to the child in the district hospital who could be transferred to the appropriate specialist unit so long as his primary hospital care was first-class. To account for the tendency for mortality experiences to become relatively less favourable in rural areas, it was necessary to look at the differences existing between paediatric practice in a district hospital and that in a teaching hospital. Close association with a university department attracted men and women of the highest calibre, many of whom devoted much of their time to research. Because many were employed by the university the staff working in a teaching hospital were more numerous than that in a district hospital. The university brought finance for equipment and research and there was an increasing preference for investing limited research resources in well established university clinical departments rather than risking money in the small scale projects of district hospitals. The Scottish Hospital Endowment Research Trust had stated that this tendency was increasing; this would have an even greater effect in depriving district hospitals of resourceful young men. It was based upon the fallacy that the value of research could be measured by the usefulness of the results.

In some other respects the contrast between the teaching and non-teaching hospitals was diminishing. In the Inverness district hospital, five members of the staff had honorary clinical lecturer status in Aberdeen University, and in 1969 the number of under-graduates who studied in Inverness was 55. Twenty-eight of these came from the University of Aberdeen and twenty-one from elsewhere in Scotland. Fifteen studied paediatrics.

Widely scattered communities imposed an even more striking difference between rural and city hospitals. The Inverness district hospital served about 200,000 people. Less than 20% of these lived within ten miles of the hospital, while more than 40% lived more than 50 miles from the hospital. 50,000 of them lived on islands. Communication links were few and long; public transport was of very limited frequency and was very expensive. Distance implied more time than mileage might suggest. Consultants travelled to the vicinity of their patients, and clinics for consultation and follow-up were held in peripheral hospitals

at suitable towns. These small hospitals were an essential feature of practice in scattered communities and were excellently staffed and administered, but their beds were inappropriate to those specialties in which complex investigation or treatment might be required. All patients admitted for specialist paediatric care came to Inverness.

In 1968, of 4,347 paediatric out-patients seen, 2,266 were seen in Inverness and 2,081 in peripheral hospitals. The consultant in the paediatric unit of a district hospital in a rural area would often be away at the periphery of his area. The very large amount of travel imposed was time-consuming and exhausting and should be taken into account when assessing work-load in the same way as teaching commitments in the city hospitals where virtually all out-patients were seen by the staff at the teaching hospital. This meant that rural district hospitals required a higher rate of consultants to beds than they had had in the past.

In addition, the consultant was required to travel to medical and scientific meetings at home and abroad. It followed that he should never be in single-handed practice and unless he was to waste time and energy in technical and routine procedures he must have the support of junior staff. The paediatric staff required in a standard 800-bed district hospital would consist of two consultants, two registrars and three house officers. If standards were to be comparable to teaching hospitals, the junior staff must include a higher grade than resident, and if the grade of registrar was to be reserved for teaching hospitals, its place in the district hospital must be taken by some career grade of equal or greater status.

In Caithness between 1954 and 1965, deaths of children numbered 214. Sixty-six died at home, 83 at a peripheral hospital and 28 in the central district hospital. The difficulty of getting the acutely ill baby or child to the central hospital often frustrated efforts to lower mortality in these rural areas. Weather was often a serious handicap to the acutely ill when journeys exceeded 100 miles.

Similarly, the distance from home resulted in delay to discharge of patients until they were strong enough to undertake it. In Inverness premature babies were discharged home when they reached 5½ lbs. in summer but in the winter months they were kept until they reached 6 lbs. if the journey home exceeded 50 miles. This meant an extra week in hospital and an extra cot. While an emergency medical helicopter ambulance service operated in the highland area, it was Dr. Macarthur's view that the extension of this service to a daily routine continuous service should be seriously considered for efficient early admission and discharge.

While it was from the rural areas that many of the very best nurses were recruited, dedication alone was not enough. Highly specialised technical training in paediatric nursing was absolutely vital. Throughout the United Kingdom, few district hospitals had hitherto provided training for the sick children's register and meantime reliance was placed on the great children's hospitals to undertake this specialised nurse training. The full demand for trained children's nurses could not, however, be met and it was Dr. Macarthur's hope that like the teaching of under-graduates, this should become a routine duty of district hospitals.

A further major development which was required in district hospitals

catering for children from remote areas was the provision of accommodation for a mother accompanying her child while in hospital.

Dr. Macarthur summarised: there should be much greater encouragement of research and teaching in district hospitals; cottage hospitals for out-patient services must be maintained; more consultants were required in district hospitals; more beds per head of the population were needed in rural areas where patients lived 50 or 100 miles from the hospital; a helicopter ambulance service was required for routine transport in rural areas; and the children's department of district hospitals should play a part in training nurses for the sick children's register.

MISS S. BARLOW, Ward Sister, Western General Hospital, Edinburgh, discussed some of the problems encountered in the running of a children's ward and examined the role of the child patient, the role of the parent and the role of the hospital.

Sudden illness beyond the scope of the mother's ability or requiring medical treatment and equipment available only in hospital precipitated removal of the child from the close environment of the home and introduced him to hospital. It had been observed that the same emotional and physical reactions were present and expressed in the sick child at home as were observed in hospital, namely, regression, hostility, listlessness, depression and withdrawal. Separation from the home environment undoubtedly added to the problem and aggravated both the emotional and physical condition of the child. Great emphasis was placed on the importance of separation from familiar people and things which arose as a result of hospitalisation. It seemed doubtful, however, that a single factor could account for the child's emotional reaction and to consider separation alone was to take no account of the differing reaction of individuals.

The role of being a patient particularly for the child involved submission. Our expectations from a child patient were high and perhaps at times beyond his capabilities. Submission could be a dangerous symptom and expression of fear and anxiety perhaps more healthy. The role of the child patient should be to be himself.

Submissive acceptance of hospital authority was often seen in the parent, and was an expression of parental anxiety of what might be ahead. The other extreme was the persistent questioner who relieved his acute anxiety by waylaying each member of staff in turn and weighing each explanation against the next. To steer the middle course was extremely difficult, but while his child was in hospital the role of the parent was to continue being a parent. He must assume an important place in the team which was working together with the sick child. Parent and child formed a family unit. The way to a child was through the parent, more especially in the younger age group.

Facilities were now available for mother to live in the hospital with the sick child, an ideal situation where mother and child were in constant interaction especially in times of stress. The single room for mother and child together had certain advantages for the young infant with feeding problems, but could result in adverse effects on the mother through repeated disturbed nights during an acute illness of the child. Mother and baby unit facilities were not in great demand by mothers; possible reasons for this included poor publicity concerning availability,

family pressures, other siblings or work commitments.

Open visiting, unrestricted by time and with parents being welcomed at all times of day and night, ran a fast second to living in with the child. Mothers, fathers, aunts or uncles could visit for brief spells during the day, but for the toddler and the under school age child this coming and going could prove difficult especially in the early stages of admission. Tolerance varied considerably from child to child. The vast majority of parents enjoyed the freedom of coming into the ward whenever it was possible for them to do so and the children benefited from the relaxed atmosphere that could ensue as a result. There could be problems, however, if the child was asleep when the visitor arrived; the visitor came to the hospital to see the child and to be seen by him. With open visiting parents were part of the team working towards the return of the child to the home environment and participating in his general nursing care.

Miss Barlow considered that a crèche would be a welcome asset to any children's ward and would allow mothers to leave children for an hour or so to enable visiting of the sick child. It might also be an asset to the hospital in the recruitment of trained married personnel to return to nursing.

The role of the hospital towards children admitted to their care was primarily to provide an environment for cure. Two items, however, merited attention, staff and special facilities. While professional ability and efficiency were necessary, professional efficiency as an end in itself was not what was required in the ward situation. In children's hospitals student nurses chose to undertake training in paediatrics essentially because of their interest in children. In a children's ward in a general hospital the student nurse spent six weeks in the ward as part of her general training. In some cases she might have no interest in children but in others, would settle down and enjoy her stay and might wish to continue in this specialised field. Miss Barlow endorsed the view put forward by Platt that ward sisters and staff nurses, to have full understanding of the child, his hospital environment and his illness, should be registered sick children's nurses. With constant change of nursing staff the child who required frequent admission often found obvious pleasure in knowing and being known by nursing auxiliaries and domestic staff who seemed to be more permanent than the nurses.

While the provision of general facilities for medical treatment as part of the hospital role was accepted, there was a need for more specialised facilities for the child. Education, either by individual attention or classroom teaching, was often available in children's hospitals. The child in hospital for a number of weeks required to have his education maintained, as did the child who came into hospital at regular intervals. For the short-term patient, education could fulfil the need for recreation. Overall there was a need to identify each child's need in a variety of age groups and to foster continuity during and after hospitalisation.

Illness no longer confined the patient to bed or cot for lengthy periods and the provision of space and play facilities involving active exertion were essential in any children's ward. Play required supervision and direction to be of benefit and play ladies were a welcome asset. Nursery nurses, social workers, occupational therapists and infant teachers all had a background with something to offer. Background

training was an asset, but talent, flair and adaptability seemed equally important for success in play leadership. The play lady should not be an occasional visitor but should be very much involved in the emotional needs of the children, focusing her activities on the child rather than on the illness.

The care of the child in hospital required the skills of a team. Child, parent, hospital and staff together had a role to play.

MISS J. MANDER, Nursing Officer, Scottish Hospital Centre, traced the history of admission of children with their mothers to hospitals.

In the last quarter of the nineteenth century some children under two were admitted with their mothers to Great Ormond Street but in general, infants were excluded from children's hospitals and parents had no contact with their children during their hospital stay. In the 1920s in Newcastle, Sir James Spence began to admit mothers and babies together and from that time the idea has been more widely accepted.

Nowhere however, had a detailed study been made of the requirements of a room for a mother and child and of what activities might take place therein. Some time ago a team from the Scottish Hospital Centre consisting of a doctor, a nurse and an architect, commenced such a study and, following a review of literature describing units in hospitals in the United Kingdom and elsewhere, and discussions with doctors and nurses, a full-scale mock-up had been constructed. This would be developed as further information came to hand.

To date, two children's hospitals had been visited to investigate the use made of single rooms and the mother and child accommodation had been studied in three hospitals: Stobhill, Aberdeen and Stoke Mandeville.

At the Royal Aberdeen Children's Hospital a twelve-roomed unit had been in use for some eighteen years. Originally a mother and baby unit attached to an infant ward, it now accepted children of up to five years or older if they had physical or mental handicaps or were emotionally disturbed. The unit constituted an independent nursing charge. The Edward Unit at Stobhill General Hospital, Glasgow, was opened in 1963 and was adjacent to the existing children's medical wards. Seven rooms were available for mother and child and a call system was in operation between these rooms and the adjacent children's medical ward which provided nursing cover. Accommodation was offered if parents requested it. In the general hospital at Stoke Mandeville, Aylesbury, the paediatric unit consisted of two wards each of 18 beds, one medical and one surgical on either side of a corridor. For the past 18 years, four cubicles in each ward had been used as mother and child rooms. As in Aberdeen, accommodation was principally for children under five years of age; indeed no child under five was placed on the waiting list without the question of mother's admission being settled. Older children with handicaps were admitted with mother. The nursing care of patients accommodated in the mother and child rooms was completely integrated with that of patients in the adjacent ward accommodation.

The provision of mother and child rooms involved consideration of supporting facilities. In addition to the shared room, toilet facilities were required for both mother and child. Storage space for clothes, bags or suitcases was necessary and a place should be provided where mother can relax away from the ward. A decision must be taken as to where she

should eat and the major problem of personal laundry examined. A kitchenette with sink, spin-dryer and ironing facilities should be available. Miss Mander drew attention to Dr. Meadow's essay "The captive mother" which revealed many of the problems associated with living-in.

The Nuffield Foundation's study "Children in hospital" suggested that eight mother and child rooms should be provided in a 20-bed unit. Hospital Building Note No.23 recommended that in a 20 - 25-bed unit, eight single rooms should be provided, four of which should be large enough to accommodate mother and child. In Aberdeen twelve rooms were provided in a total of 191; at Stobhill seven rooms were available to 140 paediatric beds and at Stoke Mandeville eight rooms for 36 beds. At the new Royal Hospital for Sick Children in Glasgow, eight such rooms would be available in each 24-bed ward. A consensus of opinion would suggest that from one to four rooms in each ward unit would be reasonable and that if the accommodation was available and offered, it would be used.

While the nursing mother today was a comparative rarity, the view had been expressed that this should not prevent a mother coming into hospital with another sick child. Again, where siblings required treatment simultaneously, the question of accommodating mother within the room with the children or elsewhere in the hospital with the children in the room or in the ward would require to be considered.

The mock-up had been built at 180 sq. ft. - 15' x 12'. Furnishings consisted of a bed for mother with drawers in the frame, a child's cot/bed, a built-in wardrobe with shelf accommodation for shoes, an easy chair, a cantilever bed table for mother, an over bed table for the child, two stacking chairs and a fold down shelf. A toy box was considered more appropriate than a bedside locker for the child. There was a wash-hand basin and two disposal sacks. Sanitary facilities included W.C., wash-hand basin and shower. A portable baby bath was stored at the shower cubicle. Lighting would consist of recessed ceiling lights having two intensities and a fixed bed-head light at the child's bed and an adjustable, removeable light over the mother's bed. Piped oxygen and suction and two twin socket outlets were available. Heating would be by ceiling panels.

Further visits to hospitals were planned to be followed by intensive discussion of the room detail. Modifications would no doubt be made and at a later stage an Information Sheet on the mother and child room would be published.

DISCUSSION

PROFESSOR J.L. HENDERSON, Department of Child Health, University of Dundee, in opening the discussion, referred to changes which had taken place in the paediatric scene. In years gone by resources had to be concentrated on acute disorders, and little time had been available for the handicapped; with social improvements, better general conditions, better incomes, housing and education, health had improved. Perhaps these factors had contributed more to the health of children than medicine. More was now done for the socially handicapped, mentally handicapped and physically handicapped than ever in the past, and developments in these fields was continuing.

The failure to implement the recommendations of Platt was disappointing. The main reasons were both economic and architectural and with old-fashioned buildings of limited size, developments were difficult. The age of admission had been restricted to 12 or 13 because of lack of space, and in turn, interest had been limited. With new hospitals and better arrangements, however, adolescents could be admitted to paediatric units. While there were arguments for and against this principle, it could be that, if the medical condition was old and known, the adolescent was better treated again in the children's unit but if a new condition was present, treatment should start alongside adults.

While the low rate of care of children in paediatric units (472 in the Western Region) was a problem, with more building and increased resources there should be an improvement. Not enough had been said about keeping children out of hospital at all cost. In times past social reasons frequently precipitated admission. This was no longer so and with the community paediatrician and good community services, the trend should be accelerated. With improved out-patient facilities, more investigation could be carried out in a humane and economical manner, and without admission.

In the general discussion other points to emerge were as follows:-

(1) Nurse training

Concern was expressed lest there be a deterioration in the standard of sick children's nurses as a result of the introduction of a comprehensive scheme of training in each Region. While it was felt strongly that the training schemes for Registered Sick Children's Nurses should be retained, and assurance was given that there was no question of closing the Sick Children's Register, the Royal Hospital for Sick Children in the Western Region could not now recruit sufficient trainees to the 3-year course to meet the needs of that hospital and of the district general hospitals with paediatric units. It was for the four children's hospitals to attract sufficient trainees for themselves and the other hospitals. While some children's hospitals had gained by the comprehensive scheme, they could not be staffed unless their own training programme continued. A solution might be found in a comprehensive course based primarily on paediatrics. Such a course would require to offer a wide experience in a number of fields and would include experience in community care to help keep children out of hospital. There was a need for paediatric care for the mentally handicapped. With a wider training and certification at the end of three years, training, it would not be necessary for the nurse to go further to extend her knowledge of nursing as a whole.

(2) The Platt Report

While the Platt Report had been welcomed, progress on its implementation had been slow. This had not arisen from any basic disagreement and, while many things depended on availability of finance, other factors were involved. The resistance to the recommendations for visiting children in hospitals throughout the country was one, and resistance on the part of Regional Boards and Boards of Management to paediatricians participating in infectious diseases hospitals was another. There were contrasts between the children in I.D. and paediatric hospitals in the Western Region and in the Northern Region where infectious diseases admissions were

about one-tenth of paediatric admissions. The problem lay in the difficulty of getting an atmosphere in which these changes could take place.

(3) Intensive therapy

Intensive therapy for children involved special machines, sophisticated medical care and special nursing. While it could be argued that there were various types of intensive therapy, assisted respiration, post-operative cardiac care and others, the major need appeared to be that of assisted respiration and an intensive therapy unit for this purpose was justified in the children's hospital.

(4) Play therapy

The importance of having a proper play programme, especially for pre-school children, was recognised. There were advantages in having someone in hospital with skill in playing with children; possible sources of trainees included nursery nurses and occupational therapists. What was required was suitable personality and it was not difficult to identify those who were not suited to the work. There was no doubt that it was an enormous advance to have provision for education through school tutors in hospital.

DISCUSSION

In the afternoon, instead of individual speakers, a multi-professional group spoke as a team, leading a discussion on "The problems in design relating to Yorkhill" (Royal Hospital for Sick Children).* The audience was invited to participate actively in the discussion as and when comment or clarification was felt necessary.

The team was as follows:-

DR. H.W.J. PARK, Medical Superintendent, Board of Management for Yorkhill and Associated Hospitals.

MR. I.G. PLENDERLEATH, Partner with Messrs. Baxter, Clark & Paul, Architects, Glasgow.

MISS O. HULME, Matron, Royal Hospital for Sick Children, Glasgow.

Dr. Park initially established that the resume of points to be discussed which had been issued to the conference pertained generally to any children's hospital, but in particular referred to Yorkhill.

The discovery, in the summer of 1965, that the then existing Yorkhill Hospital was imminently liable to structural collapse resulted in the rapid assembly of a case for immediate replacement. Considerations for the children's hospital being a separate entity included:-

(a) Medical

High proportion of emergency admissions.
Rapid changes in patient condition which resulted in intense activity.

* A plan of a ward in the new unit is given at the end of this report.

Specialised knowledge of age-determined and age-affected illness.
Problems of control of infection.
Problems of inter-action of family and social conditions.

(b) Nursing

Continuous total patient care.
Skilled observation of clinical change and developmental needs.
Relationship with parents.
Time-consuming management of children.

(c) Domestic

More extensive supplies and services.
Differing catering needs.
Differing "bed" sizes.
Safety.
Additional requirement for educational and play space.
Internal environment more important than external.
Quiet space away from other patient activities.

(d) Teaching

Disproportionately high under-graduate and post-graduate load per bed when compared to other teaching hospitals.
The need for small group teaching.

In order to work out the brief for the new hospital, a project planning team was formed four years ago, consisting of a doctor, a nurse and two administrators. This team worked closely with administrators and architects of the Western Regional Hospital Board. The hospital medical staff were not members of the team but contact with individual consultants was close.

While the creation of an economic nursing charge was an objective in determining optimum ward size, other factors peculiar to children's units required to be considered. These included:-

(a) the greater intensity of supervision and clinical care which resulted in a reduced span of control both for nurse and doctor.

(b) the nature of medical nursing and social procedures which took more time and often more staff.

(c) the need to close wards to control infection.

Factors which affected the layout of the ward included:-

(a) the greater importance of staff supervision and the lesser importance of patient privacy when compared with the acute adult ward.

(b) the greater acceptability of activity noise by the child patient.

(c) the liability of staff work areas to intrusion by patients and parents.

(d) the need for provision for parents, as residents, for overnight stay and for long visits with participation in patient care.

The generally accepted size for children's wards was 20-24 beds; Yorkhill had adopted 24 beds.

Mr. Plenderleath then sketched the broad proposals for the new hospital, indicating the former position of the now demolished original building and the grafting of new to existing work. The Regional Board's development plan remained virtually unaltered.

There was some discussion at this stage among the paediatric nurses present of the optimum size of children's wards. Bed numbers related to the available staff and facilities. Twenty beds were considered too few for an energetic sister and 30-36 too many; 24-bed wards gained common acceptance.

Mr. Plenderleath went on to illustrate the principles of the ward design. A principal feature of the children's ward was undoubtedly the inclusion of single rooms which could also be used for mother and child. It was the team's firm intention in order to maintain a peak of nursing efficiency, that the erection of additional beds was at no time to be considered. This policy was both criticised and defended, and it was stated that over the last four years, with a temporarily reduced bed complement, a consultant had never been required to direct a patient elsewhere; a bed had always been available in an emergency.

Discussion confirmed a current shortage in the Glasgow area of paediatric and other beds, but that new district general hospitals would be provided with a children's floor, as distinct from a paediatric unit, including possibly E.N.T. facilities. It followed in these hospitals that all children, irrespective of illness, should go to the children's floor. In consequence, the prevention of cross-infection within the paediatric floor required detailed study. It was suggested that an isolation unit, not necessarily physically related to the ward, but under the control of the paediatrician, could also be useful for admission purposes and patient transfer. Against this it was said that physical containment did not prevent infection. Antibiotics controlled most infections and the principal infections were hand borne and a matter of staff discipline.

Mr. Plenderleath described in more detail the layout of the nursing unit proposed. The unit comprised two 6-bed wards, one 4-bed ward and eight mother and child rooms. Ventilation was completely controlled mechanically, i.e. a balanced plenum system, windows being openable for cleaning purposes only. The ward plan was a linear development of the deep planned unit now functioning at Falkirk Royal Infirmary, but without its intensive care unit since all sick children required intensive care.

This led to a general discussion of the principles behind the Falkirk Ward. It was noted initially that the positioning of a nurse's station was not necessarily synonymous with nursing supervision. The Falkirk Ward had proved easy to run and the infection rate was low. No provision for extra beds had been included in the design and in practice it had never been necessary to turn away a patient.

It had always been the intention that in addition to its standard uses, the treatment room should serve as a single bed 'holding room' for late patient admission. In the paediatric ward, however, it was argued that the room was required at night for treatments on an average of twice nightly; these treatments which included infusions, required both visual and auditory privacy.

It was, therefore, the team's intention that the mother and child rooms be utilised for this purpose, it being highly unlikely that all eight rooms would be simultaneously occupied by children with accompanying mothers.

Dr. Park and Miss Hulme commented on the mother and child rooms to be provided at Yorkhill. These were 180 sq. ft. in area, including toilet accommodation. It was regarded as essential to locate these rooms within the ward units so that mother and child would have access to the play and other facilities. (The area of the mocked-up mother and child room on view in the current exhibition in the Scottish Hospital Centre was 180 sq. ft. excluding toilet accommodation; this might be modified in the light of further study).

There was a conflict of interests relating to grouping of patients. At Yorkhill the intention had been to have 'all age' units but the establishment of a neo-natal surgical unit had changed this. There were attractions in grouping by age but the 2-6 year old group and especially the 3-4 year old children made much heavier staffing demands. On the other hand grouping limited mixing of the different infections which occur at various ages. Mixed grouping could result in emotional problems. There were advantages in grouping by specialty, and when extended to hospital scale, the contrasts were sharp between the Royal Hospital for Sick Children, Glasgow, which functioned as a district hospital, and The Hospital for Sick Children, Great Ormond Street, which functioned as a unit for special conditions.

At Ninewells Hospital, Dundee, the paediatric unit was planned with two mother and child rooms, the remaining beds being equally shared between single and multi-bed units; the nursing team would number 20. There was thought to be no valid case for the retention of the admission unit, and the mixed age family complex would form the operative unit.

At Inverness patients were distributed in three divisions:-

(a) Under 5, accommodated in a large bay.

(b) Girls age 5-13, in one wing.

(c) Boys age 5-13, similarly in another.

There were nursing advantages and apparently no psychological disadvantages. As administrative division could restrict bed use, there was no inhibition upon bed allocation at any time.

There were in the United Kingdom only a few specialist neo-natal surgical units; these required a large number of staff. A problem of these units was that due to the lack of environmental stimulus, infants nursed therein tended to be late in reaching their milestones and this was discouraging to nursing staff.

Dr. Park noted that work areas, being subject to intrusion by patient and parent, must be so located as to be under supervision at all times. Infants would be bathed in portable plastic baths stored within the unit; older children would be bathed in the open area, limited privacy only being provided by curtaining. The ward pantry would be available to mothers for both tray service and tea-making; mothers who required to smoke would be permitted to do so solely in the sitting room provided for the use of parents. The washing of the mothers' personal smalls was a known problem; laundry facilities would be made available. It was confirmed in discussion that kitchen and laundry facilities, including

ironing and spin-drying, were required specifically for the use of mothers. These need not be within the ward area, but should be readily accessible from all wards.

There was a plea for flexibility in the use of the mother and child room. Mothers might be expected to remain for a short term (2 to 3 nights) only, in order to acclimatise the child. These rooms could be used for older children in need of privacy, for isolation purposes or, specific to the Western Region, the 'night stay' of the Arran patient. The fear was, however, expressed that the isolation resulting from over-provision of mother and child rooms could be detrimental to patients' progress. The sister's role was of paramount importance; in addition to normal duties, the handling of mothers was a major problem in itself requiring highly developed skills.

Mr. Plenderleath listed the particular requirements for services:-

(a) Ventilation must be to a high standard because of the high incidence of and vulnerability to infection.

(b) Heating must be adequate but safe.

(c) Water must be provided in all clinical areas with safe temperature control.

(d) Medical services, i.e. piped oxygen, suction, etc. were required to a greater number of beds.

(e) Lighting arrangements for children were different at night and in terms of patient control.

Safety was the paramount requirement and the following problems typified the extent of architectural involvement:-

(a) Ward chutes must be locked for obvious reasons.

(b) All windows must be lockable.

(c) Wall sockets and switches must be safely located.

(d) The use of heated ceilings eliminated the dangers from radiators at patient level and diminished both dust movement and entrapment.

(e) All fire escape doors must be child proof.

Mr. Plenderleath then described particular design problems specific to the children's hospital:-

(a) Scale

(b) Movement of patients and relatives must be more carefully considered.

(c) Building and environment must interest the child.

(d) Safety considerations.

The architectural solution had to accommodate the spiritual needs of staff, patients and visitors too. It was essential that the architect should be sensitive to both the medical care and environmental needs of the children. The perceptive horizons of children were not as wide ranging as those of adults and it was basic that any portions of the design specific to the child's environment should be within the child's terms of acceptance. The initial impression of the building at Yorkhill had been made less overpowering by masking the high block with the two-storey entrance unit located in front.

In both the internal and external entrance areas it was intended to consider such items of interest as moving water, mobile sculpture, fish tanks, pit areas, i.e. kinetic attractions to assist in holding the interest of the child. The panoramic views from ward windows, particularly to the South, were very much alive as practically every form of transport could be observed: it was equally important nevertheless to maintain interest at close quarters and suggestions such as mobiles in wards and particular items in treatment rooms were under active consideration.

It was noted that there was an extensive role for teaching in the wards, and this extended beyond the child in bed. The design of the ward should facilitate diverse teaching techniques.

Dr. Park listed requirements additional to those of the normal district general hospital ward:-

(a) Creche.

(b) Milk kitchen.

(c) Urine collection room.

(d) Mother and child room.

(e) Educational areas and associated storage.

(f) Play areas and storage.

(g) Appliance department.

In the view of the Western Regional Hospital Board, larger areas were required in children's wards, although this view had not gained complete acceptance by the Scottish Home and Health Department. The Building Note allowed only a small creche area associated with the out-patient department. It was considered by the Board that a properly designed creche was essential, and would be of general assistance to mothers of more than one child who could not readily leave children with relatives. As had been found at Ashludie Hospital, near Dundee, it could be a major help in staff recruitment, both of therapists and nursing auxiliaries, and the married woman could be encouraged to return to work on a part-time basis sooner than at present. It had been hoped initially that the creche would serve both the hospital and the surrounding district and consequently the Local Authority might assist in both the financing and provision of staff: discussion on this basis had been unsuccessful.

Dr. Park then went on to indicate the particular equipment problems confronting the commissioning team. The major issues were:-

(a) Variety of beds/cots available.

(b) Safety and toughness of equipment.

(c) Toys.

(d) Greater variety of medical equipment.

The major problem without doubt in the team's view was the bed: most available designs, whether bed, cot or combination of both, constituted a hazard to both patient and nurse. There was a requirement for bed, cot and incubator.

The Specification Working Group on cots and beds for children in hospital set up by the Department of Health and Social Security, had recently

produced a specification for a cot and a cot/bed, and prototypes were at present on view at the Scottish Hospital Centre; the cot/bed was considered by the commissioning team to be better than any other design at present available and although criticism could and had been made, the Board of Management had opted for this pattern, subject to modifications, such as increase in size of castor fitted and improvement in certain portions of the bed liable to damage hospital walls. The principal intentions of this specification were then discussed. It had been suggested that for a child up to the age of 5 months, a special small cot was necessary, and that children aged 7 years and over would be accommodated in the standard (adjustable) King's Fund hospital bed. The cot/bed had to suit the varying requirements of children under 7 years. The bed on display was a prototype, already the subject of revision. The official report on the design would be available in late April and circulated to interested bodies; comments on the design would be welcomed, and already the display of the prototypes at the Centre had attracted criticisms of the lateral instability and of potential dangers resulting from the design of the bed sides and ends.

The closing discussion centred on the procedure for authorising expenditure on equipment. Although it was said that there had been cases of unreasonable demands by some hospitals, it was suggested that there had not been complete understanding at all levels of the need for certain items of equipment in children's hospitals; this was particularly true in the case of toys which were an essential tool required in the care of children. Closer communication was reducing these difficulties, and this conference was welcomed as a contribution to a wider understanding of the functional requirements of children's hospitals.

Note: The plan of a ward in the new Royal Hospital for Sick Children, Glasgow, is given overleaf.

Scottish Hospital Centre
April, 1970.

LEGEND

1 d.s.r.
2 parents sitting room
3 relatives room
4 consultant / admin. sister
5 unit secretary
6 female staff toilet
7 male staff toilet
8 waiting area
9 female } visitors toilet
10 male }
11 tutorial room
12 equipment store
13 house officers
14 lab.
15 consultant
16 sister
17 mother & child room (with w.c. w.h.b. & shower)
18 kitchen
19 treatment
20 preparation
21 disposal
22 nurses station
23 sluice
24 bathroom (with potting area)
25 wheel chair bay
26 4 bed ward
27 6 bed ward
28 sanitary accommodation
29 toy store
30 dayspace
31 classroom area
32 book store

CLASP feasibility study

Meeting at the Scottish Hospital Centre on Friday, 24th April, 1970.

The report on Health and Welfare Services in Scotland for 1968 referred to a study of the case for a client-based industrialised system for the construction of new hospitals. The results of this study of the possible use of the CLASP system were presented to this conference by a team of speakers from the Scottish Home and Health Department and the Western Regional Hospital Board.

MR. R.E.C. JOHNSON took the Chair.

MR. B.P. BECKETT, Chief Architect of the Scottish Office, said that the change to metric measurement had provided an opportunity of considering the use of industrial building techniques to accelerate the hospital building programme. The CLASP building system had been proved successful over the last fifteen years in school, office and industrial building and was widely used in Scotland. A 72-bed ward floor had been designed in CLASP Mark IVB to provide a hypothetical basis for a feasibility study. CLASP Mark V, i.e. metric CLASP, would be used for actual projects.

Industrial building systems differed from traditional building techniques in that they provided the architect and contractor with a selection of standard components and assemblies for the design of a building. With experience, the use of these systems could save considerable time in the preparation of working drawings; sizes and assemblies followed a preplanned pattern and did not require redesigning for each new building. Similarly, contractors became familiar with the system and could construct buildings in a shorter time than 'one off' traditional designs; with labour accounting for approximately 60% of the total building costs, considerable savings could be made. Many systems, including CLASP, provided guaranteed fixed prices for a longer period of time than was possible for traditional buildings where tenders were forced up by increased labour costs. Investment became effective more quickly.

Some systems would only accept their own components or considerably modified components from other systems; these provided a formal co-ordination of design and were termed closed systems. Others accepted a variety of components from a preferred range and provided an informal co-ordination of design; these were termed open systems. CLASP was an example of a closed system, and CUBITH was an example of an open system.

There was also a distinction between contractor and client-based systems although they both depended upon a substantial building programme which could guarantee a viable production run. CLASP was a client-designed system whose design had been steadily refined in the light of fifteen years' experience. Members of the consortium (the Consortium of Local Authorities Special Programme) forecast their requirements and CLASP was able to reap price advantages from bulk purchases of components. This led to the quality controlled production of carefully designed components with a constant feedback of experience to the CLASP co-ordinating committee. The Scottish Office had been a member of the consortium for over ten years and the steel frame was in fact being made in Scotland.

Most industrialised building systems, including CLASP, reduced the amount of work under exposed site conditions. Part of this reduction was due to increasing the number of factory assembled components, and cladding the building at an early stage enabled weathertight working conditions to be provided for the greater part of the contract time - a considerable advantage when dealing with the inclement weather experienced in a Scottish winter.

CLASP was an internationally used system capable of dismantling and re-erection. The system itself was designed fifteen years ago for sites in Nottinghamshire where mining subsidence made traditional building techniques difficult and expensive to apply. It had very little sub-structure, and was capable of site adjustment at two foot increments.

The present modifications being incorporated into the Mark V CLASP system would cover the changeover to metric, improve the fire protection qualities of the system, and provide for the greater flexibility of room and door heights required in hospitals. Aesthetically the system allowed the architect considerable flexibility; he could choose components and finishes which enabled the building to fit into its environment.

Mr. Beckett showed a number of slides to illustrate the range of building types which had been constructed in CLASP, and the high quality of design which could be achieved. A school built in CLASP had won the top award at a Milan Triennale exhibition and CLASP buildings had received numerous Civic Trust awards. The system was being widely used abroad.

The feasibility study was guided by two steering groups, one covering the user requirements and the other the technical requirements; to ensure co-ordination between the two groups, the same administrators served both groups. Broad principles only were discussed, and the design drawings used for the feasibility study were not intended to provide working drawings or a definitive design. Further guidance would be required before final drawings could be prepared.

The final cost for the feasibility study was 7.2% above the current (Jan.1970) D.H.S.S. cost limit; this figure allowed for the modification of Mark IV CLASP to provide the necessary fire protection of the structure and for mechanical ventilation in the six-bed wards. When the CLASP modifications were produced as standard units in Mark V CLASP, this cost limit excess might be reduced, and if on further study it was found that mechanical ventilation was not required in the six-bed wards, the reduction might bring the final figure within the limit.

MR. K.R. TOWN, Senior Architect, Scottish Development Department, described the ward plan designed for the feasibility study. In order to reduce the costs of the 72-bed ward unit plans which had been developed from the Department's original Falkirk scheme, the Department had produced a plan using six-bed instead of four-bed wards. In this design the area was reduced by 29 sq.ft. per bed, but the shorter length of the block (350 ft.) was still too great for many of the sites likely to be available for future district general hospitals. Further modification placed the highly serviced nurse working rooms in a central band with corridors on either side. Stairs and lifts were contained within the rectangular envelope of the block but this presented problems of horizontal linkage. In the eventual design used for the feasibility study the stairs and lifts were placed outwith the rectangular block, thus allowing for horizontal connections with other departments at any level and keeping noise from

vertical traffic outwith the ward. The possibility of end entry also permitted adjacent wards to be planned in line if required. The increased circulation area consequent upon the use of a central core with double corridor was the necessary price of reducing a linear plan to a deep plan in order to provide the same accommodation in a shorter length; it was not inherent in a plan designed to fit an industrialised building system.

The plan used for the CLASP feasibility study was illustrated in detail in a joint report produced by the S.H.H.D. and W.R.H.B. in February, 1970. (A sketch plan of this scheme is included in this conference report). The feasibility study report also included a comparable plan based on the use of the Department of Health and Social Security Compendium components for purposes of cost comparison. The differences in the layout of rooms in the two schemes were minimal, and they resulted from the two grid systems used. Compendium used preferred dimensions based on a 4" module, while CLASP used a 1'-0" planning grid with a 3'0" centreline structural grid. (Other differences in construction and services were illustrated by showing slides of the two systems).

The Compendium scheme could have either a reinforced concrete or steel frame, to comply with a comprehensive performance standard; the choice could be left open until detailed drawings were prepared for tendering. In either case, there were relatively few columns on large foundations, the perimeter foundations being of the traditional type 18" thick and 5'0" below finished floor level. The CLASP system used a light steel frame with 4½" square columns at closer centres; the foundations were based on a simple raft system. The maximum span for Compendium beams was 44 ft. and the height limit varied between four and seven storeys depending on the structural layout. CLASP beams for the Mark V system were expected to provide a span of 30'0"; the height limit was four storeys.

One hour fire resistance in the Compendium floor system was provided by reinforced concrete, which allowed access to services by removing ceiling tiles. The heights available for service runs varied from 2'8½" over 8'0" corridors to 2'0½" over rooms with 8'0" ceilings and 1'0½" over rooms with 9'0" ceilings. In the CLASP system, the ceiling tiles provided the one hour fire resistance, and it was not advisable to remove them in order to gain access to service runs. It had therefore been necessary to provide fire protected freeways for services; there was one major freeway above the central corridor, with a number of minor and perimeter freeways.

All Compendium roofs were laid to falls with screeds and required few rainwater outlets. The roof structure was capable of supporting a track for a window cleaning cradle. CLASP roofs were laid flat and required considerably more outlets; it was hoped that the introduction of longer beams in Mark V would reduce this number. The light roof structure could not support a track, so provision had been made for one by cantilevering from the columns at eaves level.

The Compendium did not have its own system of cladding; for this study, two methods were considered. The first, using concrete panels with windows set back 10½" behind the face of the panels, produced a facade with a good variation between the plane of the windows and the cladding. The second method, using brick facings with the window set back 4½", again provided to a lesser degree a variation in planes and proved cheaper than the concrete panels; difficulties and delays could, however, arise in bad weather. CLASP had a system of cladding panels

and windows which were on the same plane; this could produce a rather monotonous facade. It was hoped that a modification to Mark V might be able to overcome this point; at present the only relief available was from small oriel windows developed from those used very successfully at York University.

MR. B.W. PAYNE, Assistant Regional Architect, Western Regional Hospital Board, then commented on the technical implications of the use of CLASP for hospitals. The feasibility study had started in June, 1969, with an assessment of the Mark IVB CLASP system. The CLASP/JDP system which had been developed and used for university, engineering and applied science departments, was considered to over-provide for hospital requirements, and components from this system were only used when extra bracing was required for the structure.

Mark IVB featured precast concrete base pads and perimeter beams with precast concrete slabs around the perimeter to divert rainwater and protect against frost-heave. The hollow square tube steel columns were pin jointed with diagonal bracing (which could be spring loaded where required for subsidence). The optimum span of the 2 ft. deep lattice beams was 24 ft. with a 27 ft. maximum. The roof consisted of warped plywood panels on cambered beams, and floors consisted of timber panels. Easily demountable steel stud partitions were faced with removable plastic coated galvanised sheet steel panels. External cladding was of precast concrete panels.

The study team identified those upgradings to Mark IVB CLASP which would be required to satisfy the requirements of a four-storey ward block. Apart from the extra loading of a four-storey building which required an increase in depth of site hardcore from 6" to 18" with an increase in width of the perimeter paving from 2'0" to 3'0", most of the upgrading was required to comply with the Scottish Building Regulations or the team's performance standards. Floor finishes on the ground and upper floors would be P.V.C. welded sheet; in addition, the ground floor would have a 1" proprietory screed laid on two coats of bitumen and applied over the base concrete to provide a damp proof membrane. The upper floors would be of 6" light weight reinforced concrete instead of timber in order to provide the required one hour fire resistance. Insulation would need to be provided to reduce sound transmission between floors, in order to meet performance requirements. Bridging beams would be required to allow for possible point loads such as two mobile x-ray machines parked side by side. Some wall partitions would require to be full height, from floor to underside of concrete slab to comply with fire and sound insulation requirements. Other changes would include the bay windows, provision for the window cleaning gantry and fire-proof service freeways already described. There would be an upgraded roof finish, since the normal ventilated CLASP roof would not function with partitions rising full height for reasons of fire prevention and noise reduction.

There had been full co-operation with the CLASP development group in Nottingham, and if this feasibility study proved a viable proposition, Mark V CLASP would incorporate these upgradings and should satisfy the requirements of an increased range of building types. It was thought that hospitals and ancillary buildings might form 19% of the estimated CLASP building programme. Apart from going metric, it was intended that Mark V CLASP would offer considerably greater design flexibility. Other objectives were to reduce costs while maintaining or improving standards, greater refinement in contracting arrangements and better site organisation and management.

In conclusion, Mr. Payne said the team could see no reason why CLASP should not be further developed for hospitals.

MR. A. GORRIE, Principal Assistant Engineer, Western Regional Hospital Board, discussed the engineering services included in the feasibility study. Since CLASP was designed to close building tolerances, many of the service components could be assembled off site. However, a small change in room dimensions at the design stage could have a far reaching effect on the overall structural layout and hence on service routes. Once the plan had been agreed, however, there was no difficulty in running services in the ceiling voids. Transmission of sound and vibrations from plant and equipment through the light steel structure could be overcome by the careful selection of plant with silencers and by isolating it from the structure and ducting.

The distribution of main services was by vertical ducts and horizontal freeways and disturbance of the wards for maintenance purposes would be limited. Heating was by low pressure hot water radiators with a simple zone control, each side of the block being controlled separately to allow for orientation and aspect. The ventilation system had been designed generally to flow from the perimeter to the central core. Where necessary central core rooms would have an air flow from clean to dirty areas. Ventilating ducts had been allowed for at the rear end of the six-bed wards. The scale of mechanical and electrical services in the wards was in accordance with current practice. The electrical supply could be isolated outwith the ward, and essential and non-essential supplies passed through separate switch rooms on each floor, cross-linked to cover breakdown. There would be cold water storage at high level for approximately 3,000 gallons, i.e. one-fifth of the 24-hour storage requirement. The balance would be considered in the context of the overall storage for the hospital as a whole. Because of the large number of columns it would be difficult to place either ducts or plant rooms below ground level; with a four-storey building the columns were fairly heavily loaded and the weight of roof plant was limited. In some cases, therefore, plant rooms would have to be built outwith the ward block and lift area.

In conclusion, Mr. Gorrie welcomed the proposed adoption of a standard plan as an opportunity to rationalise services. Close building tolerances and a standard plan would greatly help the engineer; contractors would have to respond by improving site supervision.

MR. W.A. BROWN, Principal Assistant Secretary, Western Regional Hospital Board, described the user requirements which formed the basis of the study. To establish these, a joint user requirement group from the Scottish Home and Health Department and the Western Regional Hospital Board had been set up comprising administrative, medical and nursing personnel.

The requirements of a ward unit could be stated in general terms from the points of view of those principally interested. The patient required a reasonable level of amenity and the facilities necessary for his treatment and nursing care. The clinician was concerned with those factors which made for a high level of medical care, and ensured a flexible response to the needs of different specialties. The nurse sought those facilities which would make it easier for her to provide a high standard of nursing care with reasonable economy of staff. The Board of Management interest in management called for efficiency and economy in operation and the Regional Hospital Board commitment in

Mr. Duncan concentrated his attention on the third of these possibilities and gave the following breakdown of the main costs of the CLASP block:-

		% of total	Cost
(a)	CLASP components and nominated sub-contractors	24%	£165,000
(b)	Erection, handling, overheads and profit on the CLASP elements	4%	£ 30,000
(c)	Major hospital upgradings	6%	£ 40,000
(d)	Engineering services	35%	£242,000
(e)	All main and sub-contractors' work including prelims	31%	£221,000
			£698,000

(a) CLASP components and nominated sub-contractors (24% - £165,000)

These prices were negotiated or re-tendered annually for the whole consortium and at present were rising just as fast as building prices in general. The consortium hoped to improve the cost control of components during the development of Mark V. There was, therefore, hope that this item could be reduced within the next five years.

(b) Erection, handling, overheads and profit of the CLASP elements (4% - £30,000)

While successive Marks of CLASP had required progressively less site labour, this item was a relatively small proportion of the total cost.

(c) Major hospital upgradings (6% - £40,000)

Some £24,000 of the £40,000 involved in this item was the cost of forming service freeways. A reduction might be made if Mark V offered a standard freeway design detail, but significant reductions would depend upon reducing the number of freeways, with obvious implications for the services and plan layout.

The remaining £16,000 was the cost of the upgraded steel floor beams to support the non-combustible upper floors, plus the additional cost of changing the standard timber floors to the required light weight concrete. It remained to be seen whether the standard Mark V floor would render the cost of this upgrading unnecessary.

(d) Engineering services (35% - £242,000)

Allowance had been made for the cost effect of extensive services on factors such as normal ceiling and partition erection sequences. It might be that a well organised contractor not intimidated by hospital services would undercut these figures. This was not likely to happen with a first major CLASP hospital but might come later.

(e) Main and sub-contractors' work, including prelims (31% - £221,000)

This was a surprisingly large part of the total cost, but some of it would transfer to the first heading if Mark V provided such items as floor coverings, sanitary services and glazed screens suitable for hospitals. Main contractors' management costs, overheads, plant and equipment costs tended to be low for CLASP buildings but high for major hospitals; this figure had therefore been carefully calculated.

To summarise, a broad analysis divided the cost into three: one-third CLASP, one-third non-CLASP and one-third services.

Mr. Duncan then commented on a number of interesting features in the cost of the CLASP scheme. The CLASP sub-structure was half the cost of the Compendium equivalent, (2% of the total cost compared to 4%), but the CLASP steel frame was rather expensive because of the high cost per ton of fabricated light steelwork. The 1970-1971 CLASP frame prices reflected the increase in the price of basic steel at the beginning of 1970. The concrete panel external walling was economical, but the cost of the CLASP metal partitions introduced in 1967, had proved disappointing.

Some 60 CLASP buildings had been or were being erected in Scotland since 1960. Present indications were that contractors were keen to price CLASP projects, and tenders were coming within the appropriate cost limits. So far nine main contractors had built CLASP in Scotland, and there should be no difficulty in achieving a good selective tender list for any CLASP hospital.

The alternative Compendium scheme had been priced for purposes of cost comparison. For the Quantity Surveyor there were advantages in a system whose pricing was based on supply and erection, with a choice of suppliers or contractors for most elements. However the Compendium was not a full system (e.g. no cladding) and some of its price agreements had lapsed (e.g. for the structural frame). The volume of Compendium work at present had not greatly interested contractors or suppliers, and contractual problems could be expected in a system which was based almost totally on nominated sub-contractors. It was nevertheless a very interesting concept.

In order to establish whether the 7.2% excess over the cost limit was due to the CLASP system, the Compendium block was costed in almost the same detail; the finding was an excess of cost limit by 10.8%. There being no Compendium cladding, concrete panels had been designed for the purpose and these proved to be rather expensive; when costed with simple traditional brick cladding, the excess was 7.4%, giving nearly the same total cost as CLASP.

The team drew the conclusion that it was not primarily the CLASP system which caused the excess over the cost limit; it was due either to the functional requirements or the plan solution, or alternatively the cost limit itself was too low. As a result of this exercise the team was cautiously optimistic that for hospitals CLASP would be competitive with any system of construction by the mid-1970s.

DISCUSSION

During a general discussion of the feasibility study, the following were the main points to emerge:-

(1) The standard ward plan

There was general acceptance of the principle of standardised planning, and the design of the ward plan used for the feasibility study derived from the extensively studied and tested Falkirk Ward. Great concern was expressed at the reduction of the standard of accommodation represented by the use of six-bed rooms instead of four-bed, which meant accepting lower functional effectiveness in the interests of economy. It was argued that whatever economy might be achieved by this means would contribute to the completion of more hospitals. It was noted that the plan was an acceptable expression of minimal user requirements and the hope was expressed that the plan used for this exercise would adapt without difficulty for variants such as geriatric assessment and paediatrics. It was emphasised that the feasibility study did not preclude a return to four-bed rooms in future plans.

(2) Potential application

During the next quinquennium the standard ward plan could be used in Scotland for at least five district general hospitals, three of which were in the Western Region - Paisley, South Ayrshire and Motherwell. CLASP was also suitable for other hospital projects and the consortium were satisfied that the scale of the hospital building programme in Scotland, presently at a level of £15 million to £20 million per annum, was reasonable. CLASP had been used for a wide range of building types and should certainly be satisfactory for such hospital departments as offices and laboratories. There seemed to be no reason why it should not be equally satisfactory for other departments.

Demands on the building industry during the next decade could be expected to rise by 50% while the intake of labour would be only 15% of what it was at present. The adoption of industrialised building could increase the output per man.

(3) Planning for the future

There was extensive discussion of the comparative merits of basing a building programme on a detailed standard plan for any particular department on the one hand against a consideration of whole hospital planning flexibility on the other. It was agreed that planning and construction must be considered together and that standardisation was inevitable. The adoption of standards should be compatible with the production of unique solutions. A hospital constructional system should be suitable for various kinds of department and should allow for probable changes of plan and mechanical services.

It was contended that CLASP, which was a closed system, ran contrary to national policy on the co-ordination of dimensions and components which was being implemented with the change to metric. The study team were nevertheless satisfied that the feasibility

study of ward blocks was consistent with broader questions of whole hospital planning with which they were fully in accord. They were fully aware of the implications of BS 4330 with which Mark V CLASP would comply; building systems and dimensional policies were simply tools needed to satisfy user requirements. The study had been carried out to determine whether CLASP, which was a going concern and demonstrably within the present capabilities of the building industry, would meet hospital requirements. The team concluded from this study that it would.

(4) Construction

Although CLASP was a steel frame system, the building programme did not depend upon supplies being maintained by one manufacturer. The columns were standard square tube sections and the consortium had obtained steel-work from two suppliers. Work was in any case being directed towards achieving interchangeability between systems.

Concern was expressed that the engineering services as detailed in the feasibility report, would not tolerate the deflection which could take place within a CLASP building. It was stated however that major subsidence could usually be predicted and appropriate design precautions taken.

It was noted that a particular attribute of CLASP was the way in which it could provide cover and enclosure very rapidly. This was a considerable advantage when building in an uncertain climate and was particularly to be welcomed because of the facility with which services could be installed.

(5) Engineering services

There was some disappointment that although an industrialised system was being adopted instead of traditional building, it still featured traditional engineering. A plea was made for a degree of sophistication greater than that represented by simple radiators and pipes. With a standard plan and system building there was every opportunity for integrating the design and installation of the engineering services with the building as a whole. It was noted, however, that in system building as with traditional building, refined engineering services depended very much on the standard of the contractors and supervision.

(6) Design and building time

There was a welcome for the saving in time in the overall programme of producing a hospital which could be anticipated by the use of CLASP. Stress was laid on the importance to morale of hospital staff of the prospect of the construction of a new hospital. The use of CLASP greatly reduced the period required for working drawings. It could be argued that this released time for the production of more fully considered briefs and planning solutions, and it was noted that here also time could be saved by adopting standard solutions, and improving the presentation and distribution of information. To judge from experience from other building types, construction time could also be expected to reduce, although not perhaps as dramatically as in less complicated buildings.

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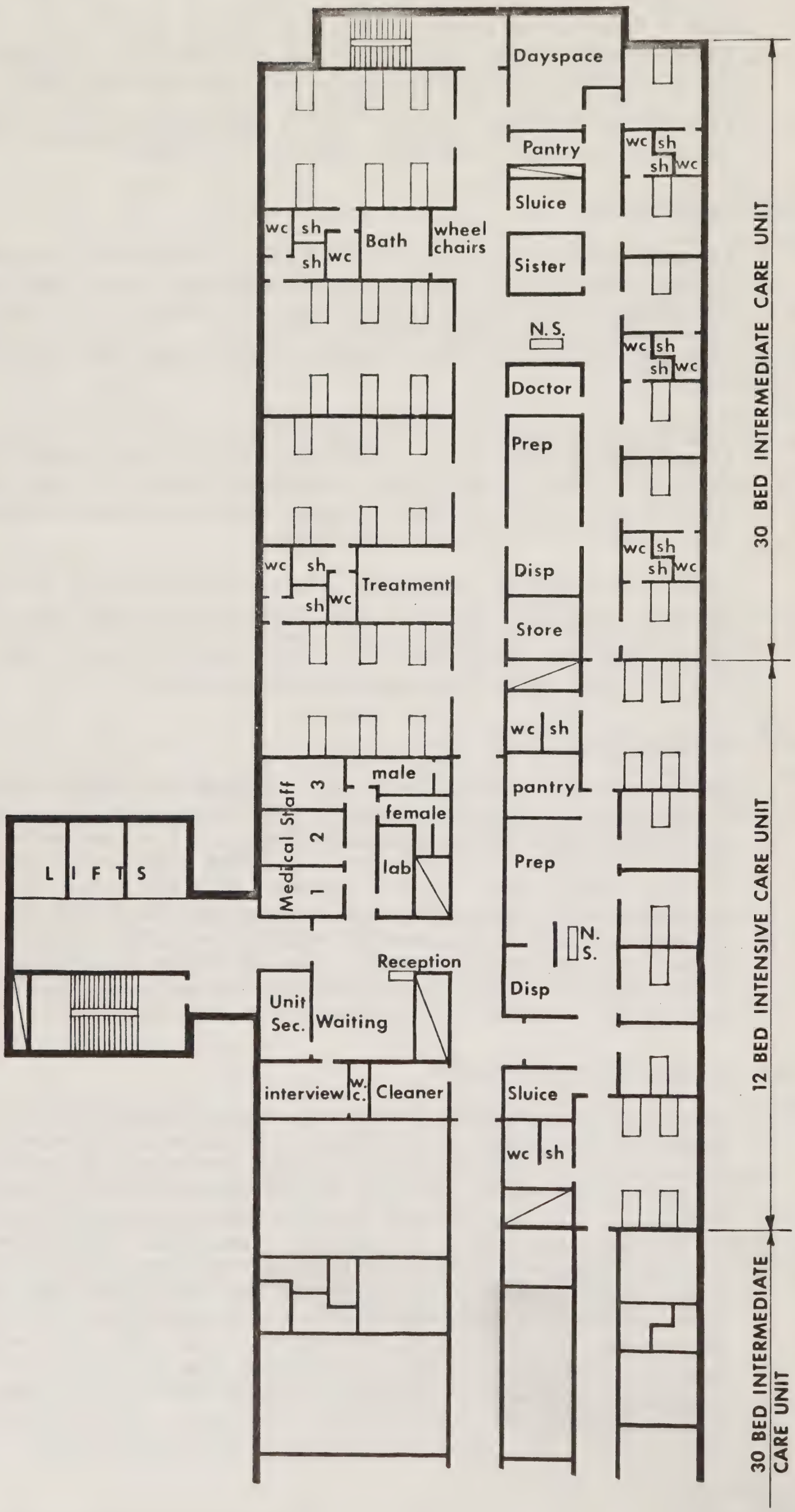
72 BED MEDICAL/SURGICAL WARD



Nurse planning and commissioning

Meeting at the Scottish Hospital Centre on Tuesday, 20th October, 1970.

This meeting was arranged in order that nurses involved in planning and/or commissioning of new hospitals or units should have an opportunity to meet each other, to exchange views and experience and also to hear at first hand of the work and problems encountered by a team of nurse planners from Ninewells Hospital Board of Management.

MR. A.R.H. BOTT took the Chair.

MISS M.E. SCHOLES, Chief Nursing Officer, Board of Management for Ninewells Hospital, began her talk by giving details of the Ninewells project, a new 780-bed teaching hospital on a sloping south-facing site of 200 acres. The building was organised on three main levels with a horizontal relationship between clinical and teaching areas. Renal dialysis, intensive care, coronary care and radiotherapy units had been added to the original brief, and it was now anticipated that the greater part of the scheme would be completed by the end of 1971 with the polyclinic opening somewhat later. The laundry, boilerhouse, college of nursing and residencies were already in use. All departments would be linked under cover.

At the planning stage the nursing contribution had originally been made by means of working parties; Miss Hood (now Regional Nursing Officer at the Northern Regional Hospital Board) had been the nurse principally involved. Later the Eastern Regional Hospital Board set up a team with a project administrator, Miss Scholes as matron-designate and the Senior Administrative Medical Officer. It was in 1968 when the Ninewells' Board of Management was set up with a Group Secretary, Medical Superintendent and three Nursing Officers, that commissioning began in earnest. This team enjoyed the inestimable advantage of all being housed in the same building. Much of the work since 1966 had been concerned with checking equipment schedules and room data sheets - a time-consuming task - but one in which the role of the nurse planner is vital, and good communications were essential for the understanding of all members of the design team. The cost of equipment for Ninewells would be of the order of £3 million which presented many problems, not the least of which was storage.

Dundee Royal Infirmary and Maryfield Hospital were both affected by Ninewells; various departments would be transferred from Dundee Royal Infirmary, and Maryfield would eventually close. These impending changes presented many delicate problems in staff communication and nurses' career prospects.

The guiding principle in commissioning Ninewells was that a completely new hospital required a completely new appraisal of procedures and policies. Existing patterns of work should not necessarily be perpetuated. There was an examination of nursing services - the pattern of the in-patients' day, duty systems and work routines - and of services indirectly related to nursing - catering, pharmaceutical, etc. A network programme had been prepared for the commissioning which was now at about the halfway stage.

Management and departmental systems and management manuals were being prepared. The nursing structure for the hospital had been worked out in 1962 and since revised. A team of management consultants (with nursing advice) had carried out a survey to identify non-nursing duties and determine appropriate nurse staffing levels. As a result, a central dish-washing service, a tray service for meals, and a supply topping-up system had been established in Dundee Royal Infirmary so that initial difficulties could be recognised and eliminated. A number of working parties were checking the book of nursing procedures derived from the Royal College of Nursing for application at Ninewells, and were preparing manuals. Nursing, domestic, clerical and catering duties were being identified so that staffing levels could be determined for the various departments in the hospital. The Board of Management had set up a working party to consider recruitment, and the intake had already been increased with financial authority from the Scottish Home and Health Department. Nurses had been asked by a questionnaire survey about their preferences for social facilities - a swimming pool featured high in the list - and existing staff were being told as soon as possible of projected transfers to Ninewells. Progress reports were issued to ensure that staff were kept informed and regular visits to the new site were organised. The decanting programme was being arranged so that certain departments would open before others with careful thought for the effects on Dundee Royal Infirmary and Maryfield Hospital.

In conclusion, Miss Scholes stressed the importance of knowing about available guide material. In 1964 there were few people who could advise the Ninewells' team about the guidance then available; now there was much more. She emphasised the importance of ensuring consultation on all points and of unremitting nurse participation in all aspects of the commissioning process. She saw one of the functions of the nurse planner in the commissioning team as that of "protector of the patient".

MRS. J. STABLES, Senior Nursing Officer, Board of Management for Ninewells Hospital, spoke of her work as a member of the commissioning team concerned with working groups which had been set up to deal with management and departmental systems. There were 53 management and 100 departmental systems, and Mrs. Stables spoke of the necessity of adequate representation if a comprehensive view of the whole organisation was to be achieved. This implied a proper balance of hospital disciplines in working groups and participation by both hospital and university staff. She described the work of the groups, showing the variety of organisational problems, the way in which some systems were interrelated, and the need for liaison among members.

A management consultant was employed to advise on the domestic and portering systems and much of his work was done with reference to the basic ward time-table in consultation with the nursing team. He had also to liaise with equipment, theatre and other working groups. The Transport Working Group dealt with all internal means of transport for laundry, C.S.S.D. goods, meals, and the movement of patients. Internal transport was mainly horizontal and was based on the use of "clean" corridors for distribution and "dirty" corridors for disposal.

The C.S.S.D. and T.S.S.U. Working Group had the complex problem of dealing with progressive changes in materials and techniques in sterile supply and the use of disposables. The C.S.S.D. would serve the whole of the Eastern Region. Basic packs were being determined for a preset tray system to serve 14 operating theatres in Ninewells and Dundee Royal Infirmary. The theatre group was concerned with the whole operating department including

patient reception and recovery. It was proposed that all premedications be given in the reception ward. The kind of problem which had to be anticipated by this group included the implications of surgical emergencies in relation to the contents of preset trays and dealing with the patients' clothes.

Other groups dealt with medical records (co-ordinating policy for the whole Dundee area and carrying out trials of proposed documentation), catering (liaising with University and considering, among other things, the use of vending machines), and pharmacy (involving an appraisal of the Aberdeen system of drug control).

Much of the work done by the groups involved a critical examination of existing systems of organisation, sometimes a look further afield at what was being done in other hospitals, and also much background reading. There was frequent consultation with nursing colleagues in hospital, medical staff were asked for comments on the basic ward time-table, and the Therapeutic Committee was consulted on matters involving drug administration. Choosing equipment was a complex exercise involving much reading, discussion and studies of equipment in use. Displays of equipment were arranged for appraisal by ward and other staff and certain items were subjected to practical trials.

Mrs. Stables spoke of the team work which was essential to the success of commissioning. It had been difficult at first for nurses to be effective at meetings and they had had to develop skills in drafting all kinds of document so that the nursing point of view was clearly stated.

MRS. C.R. STABLES, Nursing Officer, Board of Management for Ninewells Hospital, had been particularly concerned in the commissioning of the College of Nursing, the first phase of the hospital to be opened having a direct connection with nursing. She described the steps taken prior to occupation:-

(1) Checking of equipment schedules. (A second check some months before occupation caught the consequences of such changes as the enlargement of the college).

(2) Checking, cleaning, placing and testing equipment on arrival, the new building having been cleaned first.

(3) Checking the efficiency of contractor-fitted equipment.

(4) Selecting equipment already in use for transfer from the old to the new school.

(5) Orientation of staff transferred to a new environment.

(6) Compiling manuals.

(7) Planning job descriptions for staff.

The college had opened in May, 1969, and accommodated 120 students and pupils. The building also incorporated residential and recreational accommodation for nursing staff. Much thought had been given to the orientation of staff, helping them to adjust to the new layout, and to familiarise themselves with new equipment. Manuals had been devised which related to the management of the college and the residencies, and an information booklet on the use of the residencies was supplied to every resident nurse.

Mrs. Stables described the nurse recruitment campaign which was launched in 1966 beginning with an "open evening" in the School of Nursing, Dundee Royal Infirmary. This was followed up with letters to schools within the area inviting interested pupils to visit hospitals. Over 500 responded instead of the expected 100. An extensive individual follow-up exercise had succeeded in maintaining a high level of interest, and this was stimulated by hospital visits at which student nurses had proved particularly effective in communicating with the school children. During the holiday period arrangements had been made for those over 16½ years of age to spend a day at one of the hospitals, working with nurses and assisting in wards or departments, and these visits were followed by invitations to visit other departments. Visits were also arranged for relatives, and after their 'O' level examinations prospective nurses were again contacted to discuss training.

Mrs. Stables ended by mentioning other commitments of the nurse planners at Ninewells, such as giving talks on the project to various organisations and taking interested parties on tours of the college and residencies, all of which helped the hospital's relationship with the public.

DISCUSSION

Opening the afternoon discussion, DAME MURIEL POWELL, Chief Nursing Officer, Scottish Home and Health Department, emphasised the need for knowledge and training in planning, commissioning and evaluating hospitals and health centres, and she endorsed the remarks of Miss Scholes on the importance of nurse involvement. Scotland had taken a lead in planning but there was a need for nurses to have some systematic training in planning and commissioning, and thought should be given to the best way in which this could be provided. One possibility was that courses might be sponsored by, for example, the Scottish Home and Health Department, possibly on a day-release basis.

The first part of the discussion related to the Ninewells presentation, and among the main points which arose were the following:-

(1) Top management policy for Ninewells Hospital was determined at the Board of Management by the Chief Nursing Officer, the Group Medical Superintendent, and the Group Secretary. When a policy had been determined, it was issued to the working groups for programming, after which a manual was compiled.

(2) Much of the pattern of the in-patient's day was established with reference to the Central Health Services Council report*. When planning the pattern, it was necessary to co-operate with working groups dealing with the domestic and catering services. The question arose of defining the duties of nursing auxiliaries; the training of domestic staff also needed attention.

* Ministry of Health. Central health services council. The pattern of the in-patient's day: report of the sub-committee /chairman: Miss M.B. Powell/. London, H.M.S.O., 1961.

(3) The university syllabus was being reviewed and it was hoped that the bulk of medical clinical teaching would be done outwith the ward situation in demonstration rooms. The integration of a medical school with the hospital should facilitate this. The demonstration room would also be used by nursing staff.

(4) A recruitment officer would be employed and it was noted that local recruitment was more effective than national campaigns. There was much controversy over whether a recruitment officer need necessarily be a nurse. The Ninewells recruitment officer would be based on the College of Nursing and serve the whole Dundee area. The post would be at senior nursing officer level or equivalent and might suit a married woman who could not work shifts. Experience at Ninewells had shown that schoolgirls responded particularly well to introductions to happy student and pupil nurses. Interest was shown in the establishment of a personnel department which would look after the needs of all hospital staff and to which a nurse would be attached.

(5) The Ninewells team commented that there was now available from various sources guidance which had not existed at the earlier stages of their commissioning work. They felt that a planning course would be useful in communicating background knowledge, in helping nurses to develop the ability to visualise heights and sizes, to teach them committee procedure, and to give instruction on the technique of presenting cases.

At this point the meeting divided into a number of groups to discuss the usefulness and feasibility of forming a nurse planners' group which would meet regularly. All groups felt that such meetings would be helpful particularly as the nurse planner seemed to work very much in isolation, and it was noted that the Scottish Hospital Centre would be available for this purpose. The need for training in certain aspects of planning was confirmed and it was argued that planning should be seen by nurses as a contribution to patient care. Many of those present commented that there was still need for an introduction to planning, that is to say a need for education as well as an exchange of information. Career safeguards were needed for nurses involved in planning, and again it was noted that successful planning required close interdisciplinary liaison. Consideration should be given to holding planning courses for nurses. There was also a case for multi-disciplinary courses.

Scottish Hospital Centre
October, 1970.

The nurse and research

Meeting at the Scottish Hospital Centre on Friday, 6th November, 1970.

At this conference four nurses spoke about the results of their research work at the Department of Nursing Studies at the University of Edinburgh and the Director of the Department led a discussion on nursing research.

DR. J.H.F. BROTHERSTON, Chief Medical Officer, Scottish Home and Health Department, took the Chair and opened the conference by speaking of the way in which Florence Nightingale recognised the need for investigation in matters connected with nursing. He said that the nursing profession was in the front line of patient care, that by providing a 24-hour service a nurse obtained experience in all kinds of situations and that what she saw and learned should be made available to all concerned in health care.

Dr. Brotherston emphasised the importance of research in leadership particularly in the planning, administration and execution of tasks. By an analytical approach to their work nurses could make a very valuable contribution to the improvement of patient care.

He then introduced four nurses who had carried out research at the Department of Nursing Studies at the University of Edinburgh.

MISS P.S. HUME, Tutor, The Royal Infirmary of Edinburgh.

"Investigation into programmed learning and nursing techniques"

Speaking about the background to her study, Miss Hume mentioned two previous research projects which had been undertaken by nurses. These projects had concentrated on the assessment of the effectiveness of programmed learning as a method of instruction, but had not attempted to compare the programmes with other methods of instruction. The second point she made was that the cognitive element required for the acquisition of perceptual motor skill may not be great and in fact it could be reduced to the lowest order of cognition as defined by Bloom and his associates in the Taxonomy of Educational Objectives. This was not, she felt, the order of knowledge on which much valuable and sometimes unavailable teacher time should be spent.

The third deciding factor in the choice of study was the assumption that acquisition of techniques was best timed to coincide with a period of clinical experience in which the student would have an opportunity to employ the skill. The immediacy with which this opportunity would occur was not always predictable and it had been suggested that programmed learning be used in the clinical area on an individual student basis.

Miss Hume decided to study methods experiments in order to carry out this type of programme, and after some searching was able to obtain two programmes designed to teach nurses how to measure blood pressure. One of these was from a linear programmed text entitled "Basic Nursing Techniques"

by M.J. Anderson, and the second was from "Aids to Diagnosis" by M. Seedor - a branching text. There were differences in the specific information supplied in these programmes, and on this basis Miss Hume decided to find out whether two very different programmes made any difference to the performance of the students on a practical test.

Methodology

Sampling was confined to the South-Eastern Region and three nurse-training schools agreed to participate. The student groups who took part were in a block of study during which the technique of blood pressure measurement was taught, and although the stage of training at which this was taught varied between the schools it was constant within each school. In one school it was given in the second month of training, in another at the seventh month, and in the third at the thirteenth month. Students with previous training and male students were eliminated from the group before withdrawing a random sample. This sample thus included students at various stages of their training but otherwise comparable in age and sex. The students were assigned at random to one of the two methods, and the observer who measured the performance was unaware of the programme which each student used. As each student completed the programme an individual demonstration was given by the observer, verbal instruction being kept to a minimum. Two measures were taken of performance: the first was a check evaluation list, and the second was a measure of the time taken by each student to find the brachial pulse, inflate and deflate the cuff, and to record the blood pressure. There was a test of visual perception in which a manometer reading was photographed at different levels from a distance comparable to the normal one for reading a manometer. Similarly, faulty techniques were photographed from the angle and distance of an observer measuring the blood pressure.

Questionnaires were used to probe the student's attitude to this method of instruction, and these included questions about the content of the programme, and about the students' previous experience of the techniques.

Findings

There was no significant difference in the students' performance as measured by the checklist and by criterion time. There was a difference in the performance of the students on the slide test at the 5% level of confidence, and there were indications from this and from the questionnaires that one programme did seem to be better than the other.

One of the lessons that was learned from this study was that it was difficult to show up differences when restricted to one technique, but most important was the actual experience of conducting a methods experiment and encountering the snags which arose. The validation and reliability trials conducted at the start of the study had proved a profitable exercise. Miss Hume saw value in further studies of audio-visual instructional techniques.

MISS W. HUNT, Research Associate, Department of Nursing Studies, University of Edinburgh.

"An analysis of health visiting as a profession"

Miss Hunt's paper fell into four sections:-

(1) The questions about health visiting which arose during her career and led to her application for a Research Fellowship.

(2) An outline of the theoretical framework used to formulate the aims and designs of the study.

(3) A short description of the health visitor population participating in the study.

(4) A brief survey of some of the questions asked and responses received.

During Miss Hunt's career as a practising health visitor, it was obvious that the general public did not clearly understand the health visitor's function. Later, as a health visitor tutor, she found that students at the end of their course were confused about their occupational identity. A review of the literature on the subject showed much evidence of self-questioning. Harold Olenski, a sociologist in the United States, had defined the stages of the development of various professions from the organisation of the occupation as a full-time activity and establishment of training schools up to the adoption of a formal code of ethics. Judged by this criterion, health visiting was in the process of professionalisation. The attributes of the professions might be summarised as, systematic theory, community sanction, authority, an ethical code of behaviour and a distinctive culture. The aims of the study were:-

(1) To find out to what extent health visitors perceived themselves as professionals.

(2) To discover how health visitors saw themselves vis-a-vis some other similar occupations.

A pilot study was made of 29 health visitors in an area similar to that in which the main study was to take place. This paved the way for the main study in which an attempt was made to include all health visitors in the area and 70 out of 73 agreed to participate. Finally a study was made of a group of health visitor students on completion of their training course, but before their three months supervised experience; 25 out of the 26 students took part.

Miss Hunt described the personal characteristics of her sample. The group studied was predominantly female and single; most of the trained visitors were over 40 and almost half of them had been qualified for more than ten years. In the main study 43% worked on a geographical basis, about one-third were attached to general practitioners, and about 25% were engaged in full-time specialist work.

When asked to compare with other occupations, the majority of the health visitors thought that the public accorded them less prestige and respect than doctors (the higher professionals), but more prestige than clerks and hairdressers (skilled occupations). This placed health visitors in what is sometimes called a semi-professional group.

Miss Hunt then considered health visitors' attitudes towards the attributes of professionalisation:-

(1) <u>The use of professional organisations</u>

Most of the qualified health visitors belonged to a professional organisation, usually the Health Visitors' Association, and two-thirds of the students would do so. Most of them took part in professional activities and read professional literature regularly.

(2) Belief in service to the public

Almost half the practising health visitors were unaware of any doubts about the essential nature of health visiting, but many of the others found these doubts frustrating.

(3) A sense of calling to the field

Over 70% of the practising health visitors would still choose health visiting if they commenced their careers again, but only 44% of the students could say this without a period in practice to make sure. Most health visitors did not see their work as a strictly nine to five job and over 70% rated their job satisfaction higher than monetary awards and regular hours of work.

(4) Belief in self-regulation

There was high acceptance of the need for formal academic training. (The minimum qualifications for a health visitor are three years general nurse training and part I.C.M.B.). Almost half considered their own self-evaluation of their work sufficient, and over a third relied chiefly on their clients' reactions.

(5) Belief in autonomy

Students commented on the independence and freedom to use initiative of health visitors as compared with other nurses. This independence had been a reason for all groups in choosing health visiting in preference to hospital work.

These results suggested that health visitors were professionally orientated so far as the first two attributes of professionalisation were concerned but less certainly in respect of the latter ones.

Miss Hunt found that her respondents were very uncertain as to the prestige they were accorded by the public. Two-thirds thought that they had less prestige than a ward sister although more than half had held this post at some time. Almost three-quarters thought that they had the same prestige as a district nurse, more than a librarian but less than a teacher. They were evenly divided in relation to social workers. The majority thought that they had skills specific to their occupation, but over half found difficulty in doing justice to the wide range of activities involved in health visiting. Only 10% of the respondents in all groups rated themselves primarily as nurses and the histories of the respondents suggested that few health visitors enter nursing with the intention of becoming health visitors. One-third regretted the absence of technical nursing work and 70% thought that other nurses were out of touch with the realities of health visiting.

When faced with the statement "I no longer regard myself as a nurse as I do no technical nursing", all the pilot group and 80% of the other two groups disagreed despite the fact that most do not regard themselves primarily as nurses. Nursing skills were considered valuable and assisted their acceptance by families in spite of widespread misinformation about their training and qualifications.

Summing up, Miss Hunt said that the health visitors in the study seemed uncertain of their occupational status and that not surprisingly this confused image was shared by the general public.

MISS D.Y. KILGOUR, Special Nursing Officer, Department of Nursing Studies, University of Edinburgh,

"An investigation into the aptitudes of nurses who work in intensive therapy units"

In recent years intensive therapy units have developed very rapidly. It has been said that the nurses allocated to these areas, should, among other attributes be emotionally mature and technically minded. Miss Kilgour's aim was to determine whether particular personal or personality characteristics and/or special features of the work were responsible for the fact that only certain nurses seemed to be suitable for this type of work. The criteria used were:-

(1) The sister's rating of the nurse with regard to her overall suitability.

(2) The nurse's own like or dislike of the work.

The study was conducted in four types of intensive therapy units in a particular area of Scotland. There were:-

(1) Coronary care.

(2) Assisted ventilation.

(3) Chronic renal dialysis.

(4) Surgical cardio-thoracic.

The subjects were 56 female nurses on the General Register working in the units.

Four methods were used to obtain the required information:-

(1) A rating scale - the nurse was to be rated on overall suitability and performance and specific features of the work using Flanagan's 'critical incident' technique.

(2) A scheduled interview.

(3) Personality tests - Eysenck's E.P.I. and Cattell's 16 P.F. questionnaire.

(4) Direct observation in the units - the information to be obtained could be divided into two, first about the nurse, which included personal details, her attitude to equipment, her experience in intensive therapy work, and her job satisfaction, and second, about the work such as activities in the unit, communication with patients, patient dependency, and observation of machinery. Similar data was collected from sisters on staff nurses in the general wards of the same hospital.

In analysing the results the subjects were divided into groups according to the criteria and suitability, and the personality profile of the total group was compared with personality profiles of other groups and comparisons were made within the Intensive Therapy Group on personality characteristics, personal characteristics and performance ratings:-

(1) Personality

The group studied appeared on the whole to be representative of other groups on personality features. They differed from British nursing students in that they were more conscientious, emotionally mature, self-sufficient and self-controlled. Insufficient factors were tested to determine whether personality accounted for differences between the well-suited and the unsuitable nurse. Generally it was apparent that nurses suited for one type of work did not differ remarkably in personality characteristics from nurses not suited for another type of work.

(2) Personal

These characteristics did not account for differences in suitability. An inverse relationship existed in fact between the level of scientific education and suitability and this would seem to require further investigation. Neither self-selection nor attendance at an intensive care course seemed to be related to suitability but the courses would require more investigation. There were too many variables for the questions regarding nurses' attitudes to equipment to be of definite value. Job satisfaction was investigated from the aspect of certain needs being satisfied and these were not responsible for difference in suitability. The nurses in the Assisted Ventilation Unit found the most job satisfaction and those in the Chronic Renal Dialysis Unit the least.

(3) Performance ratings

Those nurses who were well-suited to the work were more adaptable and better at maintaining their composure in an emergency than those not so well-suited.

The observations which were made on the work in the various units showed considerable variation, for example, in the Chronic Renal Dialysis Unit more time was spent with the machines than in any other unit and considerably less time was spent on basic nursing. In the Assisted Ventilation and Cardio-Thoracic Units the patients were very dependent on the nurses, partly because they were not able to communicate verbally, and technical activities were highest in those units.

In conclusion, Miss Kilgour said that neither personality nor personal features were shown to be responsible for the differences in suitability and indeed the differences might be due to variations in work features or the sister's interpretation of the word 'suitable'. Selection did not seem to be necessary. The time spent with the machines was very small although a major reason given by the group of nurses in the general wards for not being willing to work in intensive therapy units was that they would have to spend so much time working with machines.

MISS P.A. GROSVENOR, Lecturer, Department of Nursing Studies, University of Edinburgh.

"Health education and infant feeding"

Miss Grosvenor began her talk by speaking of the considerations which led to her choice of project, and the background knowledge which she needed before starting the study. For this she drew on her own experience in the field, consulted with practitioners, and looked at the role of the midwife in health education. She then embarked on a large scale survey

of literature from which she obtained some very enlightening information on the historical background of the problem, finding that in every period of history a decline in breast feeding had always been associated with periods of affluence and leisure, and that there had always been a proportion of mothers who had rejected the natural method of feeding. The third source of material was text books from which she obtained information on current thinking in relation to health education, and also on the scope of similar studies. It emerged that certain aspects had not been studied, one important one being that of the attitude of the mothers towards breast feeding. Miss Grosvenor decided to find out from mothers what they felt had been important factors in influencing their decisions, and she defined her objectives in the following way:-

(1) To determine the reasons given by mothers for their choice of feeding method and their views regarding the factors which had influenced their choice.

(2) To discover the sources of information used by mothers, and to find out whether they felt that the information which was available to them was an adequate basis for their decision.

(3) To determine the extent of the information and assistance regarding infant feeding given to mothers during pregnancy and the puerperium by doctors and nurses.

Methodology used

In order to determine the type of information necessary for the study, the method of collecting this information, and the population from whom it would be collected, a pilot study was carried out among the hospital population in Edinburgh and this included interviews with mothers of first babies. From this it was decided that a cluster sample technique should be used, that a reasonable cross-section of mothers should be selected, and that interviews should be carried out between six and eight weeks after birth.

A second pilot study was carried out during which interview techniques were practised, ways of contacting respondents were tested, and an interview schedule was drawn up. The interviews from the pilot studies were then discarded, the study was conducted on the lines of tape recorded interviews and questionnaire forms, and the study was confined to mothers of first babies.

The sample fell into three groups:-

(1) Mothers who bottle fed.

(2) Mothers who had started but discontinued breast feeding.

(3) Mothers who had continued breast feeding.

The response rate was 87.3% and there were few refusals. All the contacting was done personally, and the questionnaires contained statements regarding feeding with answers of "true", "false" and "don't know". The interviews were designed to obtain information or reasons for the choice of feeding, views of husbands and relatives, views on health education during the prenatal and post natal periods, and also some questions relating to the mother's experience in hospital.

The findings

On the question of influences, 9% of mothers felt that health education was effective in their decision, 31% indicated that relatives and friends had been influential, and 19% said that they were affected by family background and personal feelings.

The factors which were important for success were husbands' attitudes, grandmothers' attitudes, housing and privacy.

A significant proportion of mothers had insufficient confidence to breast feed, although there was an impression that some had been over-confident without appreciating that there might be difficulties.

There were variations in the times of making the decision to breast feed and these fell into four categories:-

Pre-pregnancy	26%
Early pregnancy	43%
Late pregnancy	17%
After birth	14%

There were also variations in the degree of difficulty experienced in making a decision:-

61% found decision easy

17% thought the decision had been fairly easy

12% found decision rather difficult

10% found decision very difficult

The last two groups had been very conscious of indecision; some tended to leave it to the last minute and some changed their minds from day to day. There were wide variations in the breast feeding rates between different hospitals. The factors involved in the mother's decision were grouped and examined as follows:-

(a) Mothercraft classes

49% had attended mothercraft classes

50% of these had found the classes helpful and the remainder found the classes had not been good and felt that there was little opportunity for asking questions. Of those who attended the classes:-

19% had been given general advice

32% had been given advice on breast feeding

49% had not been given advice.

(b) Ward staff

When asked about the attitude of ward staff and whether breast feeding was positively encouraged:-

4% felt there had been strong pressure
18% felt there had been some pressure
6% were given advice if they asked for it
72% were left to decide for themselves

(c) Help received with feeding

63% found the staff were very helpful

13% found the staff were fairly helpful

6% found the staff were a little helpful

18% found the staff were not at all helpful

(d) Specific criticisms of hospitals and nurses

Conflicting advice was given

Lack of rest

Lack of privacy

Poor food

(e) Views on hospital policy

57% said that doctors and nurses should encourage breast feeding

41% said that they should not encourage breast feeding

2% said that they did not know

To a question on the adequacy of preparation 89% replied that they had not had sufficient help. There was a feeling that there should be more discussion on an individual basis, that more attention should be given to practical difficulties, and that it would be helpful to have contact with successful breast feeders and bottle feeders.

Miss Grosvenor summarised her recommendations arising from the study as follows:-

(1) Education of the mother by properly prepared persons

(2) There was a great need for discussion with midwives and people who are close to the mother

(3) Parent-craft classes which husbands should be encouraged to attend

(4) There should be a health record to enable people to recall discussion

(5) A record of the lactation process might be helpful

(6) There should be more supervision during after care

(7) There seemed to be a lack of consistent policy regarding lactation management; more research should be carried out in this area.

DR. M. SCOTT WRIGHT, Director, Department of Nursing Studies, University of Edinburgh, then spoke of progress and prospects in nursing research. She briefly reviewed the situation in nursing until quite recent times, and commented on current changes in medical and public demands on nursing. There was a need for nurses to redefine and assess their own role in the health team, and to undertake studies in the field of man-power and efficiency. Nurses were the biggest consumers of health service finance and also the biggest employers of health service labour, including amongst themselves men and women of varying ages, skills and levels of education. Research workers were ready to investigate the problems involved in deploying these staff usefully, but nurses should be willing and trained to carry out this work themselves. Research needed money, preparation and enthusiasm.

Dr. Scott Wright then went on to speak of developments in the past two decades, particularly in Edinburgh and London. She surveyed the work done in the Department of Nursing Studies at the University of Edinburgh and reviewed developments and opportunities for research in England. Other recent support for research in nursing was mentioned, but the money and man-power invested was as yet minute compared with medical research or research into other sciences. Dr. Scott Wright made a plea for nurses to be encouraged to develop 'research mindedness' by which she meant encouraging an attitude of enquiry and discussion, and identifying problems of the quality and quantity of nursing care required by the patient. This should be done in schools of nursing, and senior members of the profession should seek out latent talent; this might become easier with the implementation of the Salmon structure. Research was not easy and included both pain and pleasure amongst its components. With the current shortage of man-power in nursing at present, it could be considered unrealistic to develop nursing research. However, many of the nursing profession's problems were due to a lack of a questioning approach both amongst trained staff and in the education of students. Nurses with knowledge of research techniques would be required on the staff of Regional and Chief Nursing Officers, and on Area Health Boards. Doctors welcomed the development of research in nursing, and administrators might find a vested interest in the projects undertaken. Dr. Scott Wright emphasised, however, that research offered no sudden cure for problems facing the profession; reports were only of value if the profession was willing to accept the need for change. Research workers started investigation and recommended a solution - the remainder was up to their colleagues in the field and the other associated health professions.

Because much of the detailed information provided in Dr. Scott Wright's paper is likely to be of value for reference purposes, the full text is published separately as an appendix to this conference report.

DISCUSSION

Opening the general discussion, DR. G.D. FORWELL, Principal Medical Officer, Scottish Home and Health Department, said that the foregoing studies could be regarded as the promotion of research by nurses. He went on to speak of the differences between research which was undertaken by nurses and that undertaken by doctors, the latter tending to be based on the biological sciences, while nursing research seemed to be practical exercises in sociology and psychology. He pondered on the factors which had led to this, and wondered to what degree the background of the nursing profession had been effective. He hoped to see in the future more research projects being directed and conducted by nurses, rather than merely involving nursing participation.

The main points arising from the general discussion were the following:-

(1) Training in research

It was suggested that research should be introduced to a nurse's career at an early level, and that it should be included in basic courses as well as management courses. Nurse tutors could contribute a great deal by teaching problem solving and by helping students to understand collected data and its meaning in the total project, and much teaching could be done in an informal way.

In the clinical areas nurse administrators found that pressure of work prevented them from being involved and giving guidance to nurses carrying out research projects, although it was suggested that there was need for a change of attitude on the part of research-minded organisations. It was noted that senior nurses were becoming more interested in research development, more sympathetic to the researchers and more interested in the follow-up of reports. The Scottish Nursing Staffs' Committee planned to bring the subject into their management courses.

(2) Cataloguing research studies

There were difficulties in obtaining information on research which has been done or was in progress, and people expressed a need for studies to be catalogued and made easily available to those who were interested. The Department of Nursing Studies at the University of Edinburgh was already heavily committed, but the Director agreed that the collation of material would be helpful. The Scottish Hospital Centre had information on research which had been done and published and this was available to people who wished to consult them. The opinion was expressed that obtaining information was part of the research exercise and that it was not really feasible to set up research information centres on every subject.

(3) The position of the research worker

The nurse who did full-time research worked very much in isolation and felt the need of support and encouragement. There was a certain amount of insecurity, particularly if she depended upon grants for future projects, and it was not always easy to return to the hospital field after a period of absence. There was a need for professional research workers but most of them would not stay in research permanently, therefore it was important that other parts of the profession recognised this and made room for people returning. It was suggested that a research fellow could have a position of responsibility, either clinical, teaching, or administrative, and that it would be recognised that she would be able to continue research alongside her other work. This was already happening in the Royal Infirmary of Edinburgh and it was hoped that the concept would develop.

Summing up, DR. M.A. HEASMAN, Co-Director, Research and Intelligence Unit, Scottish Home and Health Department, spoke of the solitary confinement of Research Fellows, of the way in which they had been cut off from society without direction, and the fact that they had had no teaching in research methods. He said that they had overcome this and had benefited from the experience. He appraised the studies which had been presented and noted that three of them were introspective - that is they were studies of the nursing profession.

He suggested that there was much which could be done on the clinical side especially with the growth in technical nursing and that was the area in which the nurse could be most helpful.

One difficulty which beset the aspiring research nurse was the reluctance of universities to accept non-graduates for higher degrees. Universities should review this policy in the light of the fact that nurses were usually non-graduates. Meanwhile it was encouraging to note that operational research funds were available to support nursing research. Dr. Heasman ended by applauding the nursing profession for having begun to breed its own research workers.

Scottish Hospital Centre
November, 1970.

PROGRESS AND PROSPECTS IN NURSING RESEARCH

Paper given by Dr. M. Scott Wright at a conference held at the Scottish Hospital Centre on 6th November, 1970, entitled "The nurse and research".

This morning we have heard about research projects being carried out by some of the research fellows of the Department of Nursing Studies. By this time there will, I think, be two principal questions forming in your minds: firstly, is it necessary for nurses to be prepared to undertake such investigations and, indeed, is there any researchable area in nursing? Secondly, how have the nurses who talked to us this morning had the opportunity to make these studies and do we need more of them?

It is reasonable to argue that the nursing profession has made satisfactory progress in giving a service to the public, working with medical and other specialists, producing leaders, recruiting and educating trainees without its personnel getting involved in research activities. Until quite recently (up to the last decade), these arguments could be made with some justification. There was a sufficient supply of cheap female labour available as a direct result of the two major world wars. Women's choice of careers was limited mainly to teaching, nursing or clerical work and, once in those fields of employment, they usually stayed and gave long years of conscientious service gradually reaching the top professional posts by virtue of seniority rather than necessarily being the most suitable person for the appointment.

The image of the nurse which developed over the years was of a "biddable" assistant to the medical staff of the hospitals and with local health authorities. She had some training for her work, but this was seen to be subordinate to her duty to carry out medical orders and nursing procedures without question. Frequently, because of long years of service in post as a ward sister, doctors came to have a high regard for the judgment and skill shown by senior nurses.

This relationship between medicine and nursing was a reflection of the public attitude towards the role of the principal health service professions until quite recently. But in the last decade or two, there has been a revolution not only in scientific and technological progress, but also in the attitude of the public and the medical professions to the quality and comprehensiveness of the service needed. The factors involved are well-known to us all and need only to be called to mind here - the increased significance of preventive as well as curative therapy, the demand for health education, the growing numbers and complexity of professional personnel working in the service, the greater affluence, sophistication and education of the public in relation to the standard of medicine or nursing they expect, the drastic changes in the labour market and opportunities for women, the demographic trends in British society, and last, but by no means least, the unprecedented increase in scientific knowledge available to medicine. The transplant surgeon, the psychiatrist and the general practitioner all have access to new techniques and therapies to prevent and cure both mental and physical illness. But they equally know that they cannot give therapy in isolation and that increasingly their own services are only effective if backed up by nurses who are educated, alert, enquiring, objective and permitted to use their own time and skills effectively.

These are some of the main reasons why, in recent years, it has become a matter of urgency for nurses to study the implications of change within their own profession. There are two broad lines of enquiry which they must pursue. Firstly, it is essential for them to redefine and assess their own role in the health team and to investigate and establish the standards of care they consider desirable to provide for their patients. If we define a profession as a group of people possessing a body of knowledge unique to its practitioners, then it becomes even more evident that in the light of the complex cultural, scientific and socio-economic changes taking place in society, the education and practice of all branches of nursing must be assessed and kept under continuous review by nurses who themselves are qualified to undertake investigations of all types from the most sophisticated to the relatively simple forms of enquiry. The challenge is direct and serious. If nursing is indeed a profession, then there must be an identifiable and unique area of activity which can be investigated and evaluated by members of the profession qualified to do so. A quantitative estimate of how much nursing service is required by clients and patients is on its own of limited value in assessing the work of nurses, since it is of equal importance to assess the standard and quality of the service provided. A clear illustration of how little is known about the quantity and quality of care provided by nurses is given in William Broome's paper published in the *Nursing Mirror* of 25th July, 1969, entitled *Dressing Technique - a Cause of Confusion?* The writer indicates all too clearly that the lack of any scientific principles of operation leads to variable standards of care and also to differences in use of nursing personnel. Not surprisingly equally little scientific data is available to establish principles upon which the nurse can care for the psychological needs of patients and clients. In this context we do well to remind ourselves that the nurse has the opportunity of longer and more personal rapport with patients and clients than other members of the health team.

Secondly, nurses must turn their attention urgently to studies in the field of man-power and efficiency. Nurses are the largest group of professional personnel employed within the health service, and though even now it can be argued that many of them (especially senior personnel) are hardly paid the rate for the job, it does not alter the fact that nursing salaries and training allowances are the single largest item of expenditure in any hospital or community health service budget. There is already evidence, both factual and subjective, that frequently highly qualified and skilled nurses are under-employed, or asked to undertake tasks that could as well be done by less qualified staff or even non-nursing grades. At the other end of the spectrum, they are undertaking more and more so-called 'medical' duties. Such variability and uncertainty regarding their proper task and function is not only frequently wasteful of health service finance, but harmful to the morale and enthusiasm of the staff so misused. Adequate and continuing investigation of the proper role and function of nurses of all levels and in all aspects of the health service will pay dividends in terms of better return on expenditure.

Nurses, as well as being the biggest spenders of health service money, are the biggest employers of labour - nowadays some chief nursing officers carry responsibility for 2 - 3,000 members of staff who provide a 24-hour, 7 days a week, service between them. This is an assignment which would challenge many an industrial manager. Moreover, this staff will cover many levels of education, professional skills, ages, including both men and women. How are they to gain satisfaction

from their jobs; how are the married and part-time staff best employed; how can the local qualified labour force be encouraged to continue in active community or hospital service; what hidden factors cause sickness absence to fluctuate periodically? These are a few of the questions which nurses themselves must be able to study and assess as experts in their own field. If nurses sit back and permit these problems to be investigated by research workers of other disciplines, then they will only have themselves to blame if the solutions offered - however statistically sound - do not fit in with their knowledge of the needs and developments best suited to the profession.

If there is a need for nurses to carry out research in their own professional field, to what extent are they able to do so? The answer is, frankly, that as yet only the tip of the iceberg is being touched. Research in any discipline, and not least of all in the social sciences, makes heavy demands upon those who want to find the answer to their questions and problems and no exception can be made for nurses. Three components are essential - money, preparation and enthusiasm. Until very recently, all three have been missing in British nursing; but the tide has begun to turn during the past 15 to 20 years. Quite a considerable and important part of this fascinating story has taken place here in Edinburgh. In 1953 the University of Edinburgh and the Royal College of Nursing accepted a grant from Boots (The Chemists) to establish a fellowship in the University, to be held by more than one fellow, who must be a graduate but not necessarily a nurse to carry out certain specified studies. Two nurse graduates were appointed to the fellowship for three and four years respectively, and the first fellow - the late Miss G.B. Carter - was influential in planning the establishment of the Department of Nursing Studies and advised on the introduction of a new two-year course for nurse educators in Scotland. Much of Miss Carter's knowledge and experience of research and education came from her visits to the U.S.A. where the need for research and academic preparation for nurses was already well established.

During these same years, the Dan Mason Nursing Research Committee was established by private funds in London, with again two nurses appointed successively as research officers. Several reports have been published by this Committee.[1,2,3,4] All the Dan Mason reports have helped to throw light on aspects of the manpower situation; and have in turn, like most investigations, highlighted the need for further study. But in 1970, this project has been wound up principally due to the increasing cost of mounting effective studies.

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1. *The work, responsibilities and status of the staff nurse.* Dan Mason Nursing research committee, 1960.
2. *The work, responsibilities and status of the enrolled nurse.* Dan Mason Nursing research committee, 1962.
3. Ramsden, Gertrude A. *and* Skeet, Muriel. *Marriage and nursing.* Dan Mason Nursing research committee, 1967.
4. Skeet, Muriel. *Home from hospital.* Dan Mason Nursing research committee, 1970.

If, however, during these years few nurses were interested in studying their professional role and responsibilities, an increasing number of social scientists were anxious to do so; and during the late "fifties" and "sixties" reports on some of the problem areas - such as student wastage, patient attitudes and stress - were published by such workers as Barr,[1] Menzies,[2] Revans,[3] Cartwright[4] and MacGuire.[5]

By the time the two Boots Research Fellows had completed their investigations in 1961, the Department of Nursing Studies had been in existence in the Arts Faculty of the University since 1956 - a great experiment and innovation and, as yet, the only academic department of nursing in any British University. The importance of research in such a setting was seen from the beginning by the appointment of research fellows as well as teaching staff. The studies undertaken by Audrey John[6] and Anne McGhee,[7] published in 1961, remain valuable and relevant. The staff of the Department, which is now part of the Social Science Faculty, have the same responsibility for research and teaching as all their academic colleagues in the University; and despite a heavy teaching programme and the "ups and downs" of a new department, an encouraging amount of research has been undertaken by staff principally for the award of the intermediate M.Sc. degree.[8] Arrangements have been made for these to be published in a monograph series, published by E. and S. Livingstone, and the first of them has been printed this year.[9] In 1969 the Department of Health and Social Security awarded the Department a grant of £24,000 to undertake a study of the work of the nursing team in general practice under the direction of Dr. Gilmore.

Since 1968, two research fellowships over a two-year period have been awarded by the Scottish Home and Health Department to qualified nurses in any part of the service who indicate interest in a suitable area of nursing research, to study methods and techniques by carrying out a small field study. Of the seven fellows so far selected, and seconded from service on full pay, six have been attached to the Department of Nursing Studies and one to the Department of Sociology in Aberdeen University.

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1. Barr, A. The training of student nurses. *British journal of preventative and social medicine*, vol.13, July 1959, p.149-155.
2. Menzies, I.E.P. *The functioning of social systems as a defence against anxiety*. Tavistock, 1961.
3. Revans, R.W. *Standards for morale*. Oxford University Press for Nuffield Provincial Hospitals Trust, 1964.
4. Cartwright, A. *Human relations and hospital care*. Routledge, 1964.
5. MacGuire, J. *From student to nurse*. Oxford Regional Hospital Board, 1966.
6. John, A.L. *A study of the psychiatric nurse*. Livingstone, 1961.
7. McGhee, A. *The patient's attitude to nursing care*. Livingstone, 1961.
8. Altschul, A.T. *Measurement of patient-nurse interation in relation to in-patient psychiatric treatment*, 1968.
   Lancaster, A. *A study of professional values and attitudes among registered nurses*, 1967.
   Grosvenor, P. *Influences affecting mothers' decisions about infant feeding*, 1969.
9. Norton, D. *By accident or design?* Livingstone, 1970.

Meanwhile, similar activities have been taking place over the Border. A very important decision was made in 1963 to appoint a Nursing Research Officer to the Department of Health and Social Security - Miss Marjorie Simpson - who is in the audience. As a nurse and graduate, herself experienced in research methods, Miss Simpson has done a great deal during the past seven years to focus attention on the need for money to prepare nursing personnel, to organise the dissemination of research findings and, above all, to encourage the brave spirits who have a "hunch" about a researchable idea.

In association with the Royal College of Nursing, England and Wales, the Department of Health and Social Security in 1967 established a Nursing Care project by providing money in alternate years for six nurses to be awarded two-year fellowships to learn how to develop tools to measure the quality of nursing care. Some of these studies on subjects of vital interest to the art and practice of nursing have been completed and are to be published in the near future. Two fellowships for the investigation of community nursing problems have also been made available by the Department of Health and Social Security to the Department of Social Medicine of the University of Manchester.

In the same year, 1967, the Department of Health and Social Security provided money for the General Nursing Council, England and Wales, to establish a research unit to analyse a vast quantity of material which was being collected on the background of student and pupil nurses and their examination achievements; to systematise and update these processes and to undertake evaluation of a large number of experimental programmes being carried out by various Schools of Nursing and one or two universities.

One or two other organisations - such as the King Edward's Hospital Fund for London and the Nuffield Provincial Hospitals Trust - have recently supported some research projects in nursing, the latter by granting £22,000 to the Department of Nursing Studies this year for the establishment of three or four clinical/academic nursing posts between health service hospitals or agencies and the Department. This is an entirely new method of attempting to provide the close link between academic and practical nursing in the field which, in view of the recently established integrated degree and nursing programmes in the United Kingdom, is now of vital importance to the profession. It is hoped that some research projects will be associated with this project close to the needs of patients and the nurses caring for them.

Relayed in this way, it seems as though a great amount of money, time and effort is being spent on nursing research; and indeed the profession has cause to be grateful to the government departments and one or two private benefactors who are already convinced of the need for this development. However, before we become too elated or critical - according to our inclinations - let us remember that the money and man-power invested in nursing research is as yet embryonic as compared with medical research or research in the social and educational sciences. Millions of pounds a year are provided by the government to establish and maintain Medical Research Council Units; large sums of money are available to encourage clinical and experimental research in medicine and further generous donations are made available by industry for the award of medical fellowships. In Scotland, for instance, the resources of the Scottish Hospitals Endowments Research Trust are available to finance medical research. In view of the changing and developing role of nurses and other professional members of the health team, perhaps the criteria for using such public money should now be extended to include more than one health service discipline.

Financial support is, of course, only one part of developing research expertise and interests. No amount of money will help if personnel of high intelligence and endeavour are not available to undertake investigations. It is in this area that we become aware of the greatest difficulty facing the nursing profession.

What are the prospects for nursing research? We might as well ask the question "What are the prospects for nursing?" since it is unlikely that the profession can survive for long in the future without more scientific and objective means of defining, establishing and developing the body of knowledge, the attitudes and the skills which belong to it.

Nurses have much to do before they can be certain of the content of their own work and their role in the health team, particularly as these must change at an increasingly faster pace as more knowledge becomes available about the needs and attitudes of patients, the method of communicating with them and within the nursing team itself. All these changes are taking place against a background of increasing medical scientific knowledge. The closer we bring our studies to the needs of patients and clients, with whom the nurse has a more continuing relationship than other members of the health team, and learn to undertake studies of nursing as well as of nurses, the greater becomes our need to have the comprehensive background of research methods and techniques which is usually to be found within the universities. Nurses must be given the opportunity to learn to undertake research as independent workers, as equal members of a research team, or, if necessary, as leaders of the team.

I should like to read a short extract from the excellent book *Fundamentals of research in nursing* written by David Fox of Columbia University, which illustrates clearly that over and above being knowledgeable about research techniques, nurses have a unique contribution to make to nursing and health service investigations.

> "In recent years when research in nursing began to be conducted on a large scale, nursing followed the model of education in bringing in researchers trained in other disciplines, primarily psychology and sociology, to conduct research. The reason for this was simple; there were few nurses trained in research methods and techniques and those few were not nearly enough to conduct research on the scope for which support was available. The influx of psychologists and sociologists to conduct the research inevitably moved research in nursing in the direction of these disciplines and away from patient care. Psychologists studied psychological problems in a nursing context and sociologists did the same with sociological problems. Nurses had little choice in the 1950s, if research was to be conducted, other than to permit the researcher from other fields to participate.
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> In the 1960s the situation has changed considerably. Now there are numbers of nurses who, by virtue of their advanced training in research design and methodology, can be considered researchers. Thus, nursing now is in the position of having some of its research conducted by researchers trained in the discipline of nursing itself. However, at present, and in the foreseeable future, the number of nurses trained to conduct research will not reach the number needed to do all the research in nursing that might profitably be conducted. This means that a choice will be necessary, both for the profession as to what research needs to be

done and for the individual research nurse as to the research to which she will devote her time, training and talents. It seems to me that, in view of this situation, these nurses should select and do that research to which they can make a unique contribution, and their unique contribution is not knowledge of research methods but knowledge of nursing.

This suggests a careful delineation of areas requiring research in nursing to identify those which primarily require a knowledge of nursing and, secondarily, a knowledge of research, for this research can best be done by a nurse trained in research with the help of consulting researchers. It also means identifying and leaving to non-nurse researchers those aspects of nursing research in which the primary need is knowledge of research methods and a knowledge of nursing is secondary. This research can be done by non-nurse researchers with nurse consultants providing an understanding of nursing as it is needed".[1]

The experience and techniques required by nurses to undertake research at this level is to be found mainly in the universities and in those institutions nurses must learn to participate in and conduct studies. As you have heard, quite a number of projects and studies are already under way in the Department of Nursing Studies, and we have every reason to hope that resources will be made available in the near future to expand this programme in terms of man-power and investigations undertaken.

What can members of the audience do to assist the nursing profession, and incidentally their own profession and interests, over the next critical decade to establish nursing research as a vital factor in providing better patient care, more efficient use of man-power and resources and making nurses more effective members of the health team? The answer is - a great deal. To begin with the nursing profession, let us develop at all levels and at all times a "research-mindedness" (to use a phrase first coined by our Chairman at least ten years ago).

"Whereas the ability and opportunity to carry out research must be limited to a minority in any profession, an urgent and understanding sense of the need for research should be part of the mental equipment of every member of a profession worthy of the name".[2]

This phrase, "research-mindedness", simply means encouraging an attitude of enquiry and discussion, identifying problems of the quality and quantity of nursing care required as close to the patient as possible. It also includes the possibility of collecting facts and figures, however elementary, to help us think more realistically about any problem. Most of us cannot, and will not, wish to pursue a career in research; but we can discuss our unsolved problems, our new ideas and seek the advice of those who can direct research or lead us to investigate further.

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1. Fox, D. *Fundamentals of research in nursing*. New York, Appleton-Century-Crofts, 1966. p.47-48.
2. Brotherston, J.H.F. *Research-mindedness and the health professions*. Scottish Home and Health Department, 1960.

A most important feature of developing this research-mindedness is to involve our students in problem solving and teach the elementary principles of statistics in schools of nursing. This knowledge will be far more valuable to them in future than any attempt to teach details of all the various practices and procedures found in the text-books. Nursing needs thinkers as well as doers and there is no reason why these two qualities cannot be developed side by side.

Lastly, under this heading, it is of the greatest importance that senior members of the profession should seek out latent talent in the profession. The Salmon structure should enable us to carry out this responsibility more adequately than before. When a nurse shows enthusiasm to study some subject in depth and has the ability to learn research methods and techniques, do not think that she has chosen a soft option. Nothing could be further from the truth as I can personally testify, and the nurses who spoke this morning can talk about the "pain and pleasure" of research, if you wish them to do so. Great courage, integrity, determination, associated with a reasonable level of intelligence and a good sense of humour, are essential to carry one through to the completion of any study. In addition, it is necessary to have enough bonhomie and charm to enlist the support of overworked staffs in the field and perplexed patients.

I am fully aware of the very serious man-power shortages affecting the nursing service at the moment, especially in the hospital sector. In fact I am close enough, in my own experience, to the hospital service to know how appalling and unnerving is the unending task of senior nurse administrators trying to run a service on inadequate numbers of staff. You may well be thinking, therefore, that the suggestions I have made only add insult to injury and are quite unrealistic.

There is little doubt, however, that to a large extent, the present situation is due to the profession's inability or unwillingness to stimulate the questioning approach among its qualified personnel and in the education of its students. We are witnessing the development of a vicious circle which it is up to us, as leading members of the profession, to break. We seem to be coming close to a major crisis in the staffing of our hospitals. But the sooner we can present the facts and figures of the situation scientifically analysed to Regional Hospital Boards and Hospital Boards of Management for medical and administrative colleagues, the sooner we shall be in a position to avert disaster or over-come the situation.

It should be the objective of Regional and Chief Nursing Officers to obtain the permission of their Board to employ a nurse skilled in research methods and techniques in the near future. Every Area Health Board will require a nursing research consultant with a team of experts to investigate the quality and quantity of nursing service needed as well as the most effective use of man-power in the area. You can already see the numbers of nurses who will need knowledge of research.

The other major health service professions - the doctors and administrators - will undoubtedly have a great influence on the profession's chances of success in these endeavours. In my own experience, I can only say that whenever medical staff have been approached to give guidance and advice about methodology or resources for a specific project, the response (certainly in Edinburgh) has been excellent. There is little doubt that more and more doctors are realising that the better the standard of nursing care, the better the organisation

and staffing of the service, the better will become the standard of medical care and service. However, they may need to share with the other health professions, especially nurses, some of the financial support they receive from government and other sources in order to bring about a more even distribution of financial resources for the benefit of the health service. Administrators, too, must be willing to support the development of nursing research. They can even have a vested interest in such enterprise because improvement in efficiency and morale may bring about a welcome reduction in the budget!

As stated earlier, only the tip of the iceberg has been touched in nursing research. There is almost everything to be done and everyone to be trained; and so my final plea to you all is for the benefit of the health service to do all you can, individually or collectively, to assist those who are endeavouring to carry out specific studies, even though they may be getting in your hair; communicate the points we have made today to all your own staffs. Above all, it is necessary to understand that even the most valuable research projects will not solve all our problems tomorrow; they will undoubtedly merely uncover more fundamental ones requiring investigation. Research offers no sudden panacea or cure for the unsurpassed problems facing the nursing profession; and at best the results of projects take some time to publish and to feed through to all levels of staff.

Nor is any report or survey resulting from research of any assistance unless there is willingness on the part of the nursing profession to accept the need for change and implementation of the recommendations. The research worker can only start the investigation and recommend the solution required - the rest is up to their nursing colleagues in the field and the other associated health professions. This last thought brings me back to the interesting papers presented this morning by some nurses who have been undertaking research. You will have realised that their studies - small and limited as they had to be - already provide some guidelines to the profession regarding the method of caring for patients or clients and the personnel required to do so. Although, of course, there is much more work to be done to validate such findings, I hope that you gained some impression that nursing research is not some remote, esoteric exercise for a few academic types, but the enquiring, probing arm of the nursing profession which will be able to offer practical solutions to nurses working in all parts of the health service.

Rehabilitation services for mental deficiency

Meeting at the Scottish Hospital Centre on Friday, 27th November, 1970.

Hospital and community care of the mentally handicapped involves a balanced use of many services to foster personal independence and to develop to the maximum whatever abilities the individual may possess. This conference sought to examine this problem and brought together representatives of hospitals, social work departments, education departments, disablement resettlement offices and rehabilitation units.

MR. A.R. BATCHELOR took the Chair.

DR. R.C. MACGILLIVRAY, Physician Superintendent, Lennox Castle Hospital, described the problems of returning patients to the community under four headings; the patient himself, his family, employment and the public attitude.

Mental retardation in the patient was extremely complex. Its boundaries and plans for rehabilitation depended upon the social system in which it was recognised. The range of handicaps associated with deficiency were enormous and included varieties of sensory deprivation, blindness, deafness, paralyses and epilepsy. There were all degrees of intellectual impairment and the full range of psychological disorders from emotional disturbances through behaviour disorders to psychoses. With permutations and combinations of multiple handicap, problems stretched to infinity.

It was inappropriate to call subnormal the substantial group of patients who were physically normal but with poor mental endowment for educational purposes. Theoretically, in a well-conducted, civilised society, these "normal" people could all be absorbed and their abilities utilised. In the United States, this point had been recently appreciated by administrators with advanced ideas, who believed that an attack on poverty would tend to reduce the number of cases of retardation. Better social conditions could create better opportunities for the effectively "normal retardates". The problem was largely economic and social. The proportion of "normals" actually in hospital in this country was in reality small. Neurotics and mild psychotics who were educational failures, often required hospital treatment, whereas if they were clever, they would be able to maintain themselves in the community.

The defective was not merely an under-powered adult; relative to their more fortunate fellow creatures, the defective personality was "simple". This simplicity was more than a low I.Q. test score, it was a global psycho-biological simplicity. The psycho-neural dynamisms could not reach a full abstract-symbolic expression: they were less variable, flexible or reversible than in the normal, and this simplicity coloured their whole behavioural picture, their thinking, imagery and emotional life.

Higher grade cases of this type; stable simpletons whose behaviour value was not lowered by emotional components, survived in society, unskilled but useful citizens. All the national surveys agreed that the incidence

of mental defect in the population was at least nine per 1,000. Scotland with a population of over five million, must therefore have some 45,000 mentally handicapped people. In fact there were less than 7,000 beds for the mentally retarded, so that 85% of the mentally handicapped were already receiving community care or what too often simply became home care.

The normal nervous system was essentially labile and, therefore, unstable until it had reached its full potential development when it became not stable but rigid. Rigidity, fixity of behaviour and inability to vary the pattern of response occurred normally in senile people. It occurred much earlier in defective personalities, whose simplicity militated against variability of response; who tended to stabilise by getting into a rut - a fixed behaviour pattern below their potential - a rigidity, indeed encouraged by the routine of institutional environment. The lower the grade, the sooner rigidity was reached; a defective personality was rigid before the thirtieth year; the imbecile even earlier, the idiot from the earliest years of life. In a study of catatonic psychosis in idiots, (MacGillivray, 1954), psychotic symptoms remained fixed without noticeable deterioration during the eight years of observation. This could only have been because their impoverished nervous systems had become completely rigid. The true, congenital, profound idiot was rigid from birth; the man of genius remained labile at eighty.

The apparent stability of the "stable for level" group, whether children or adults, was psycho-neural rigidity, rather than normal labile adaptability, but under strain their control snapped, giving rise to unpredictable behaviour. For example, a well-behaved lad, a good worker at an unskilled job, sent into society, broke down completely in a matter of days. Even within the institution a sudden stress might precipitate disaster. Any alteration, for example, an improvement in diet, was bitterly resented. Such institutionalised people lived a completely routine life, yet were content. In social adaptation they were limited; young men, highly trained in housework, after succeeding in private houses, broke down in hotel work. Used to an individual employer, they could not adapt to orders from a number of staff to say nothing of guests. Yet a patient who failed in one post might do well in another without apparent logical reason.

A trend over many years had been to admit a greater proportion of helpless cases than formerly, so that discharge was increasingly unlikely to be possible. This trend was emphasised by the increasing life span of idiots and imbeciles under present-day conditions. With this ageing the work of nursing and training was becoming progressively harder while the burden on the staffs of hospitals grew heavier. Nowadays even low-grade children grew up and lived for decades. They could not be returned permanently to the community and they required nursing care, nourishment, entertainment and occupation. They varied from the nearly helpless to those who could be employed at simple tasks but who, when they grew older, and "crystallised out", became less easy to occupy.

Within the hospital the educational programme necessary if the patient was to have the greatest opportunity for smooth return to the community was generally lacking. A large number of patients functioned in reading, writing and number work below the ability which their mental ages suggested. Many factors contributed to this. Sometimes organic factors operated in addition to their intellectual disability. In others, a persistent discouragement during their school years had made them lose confidence in

their ability to learn, and ultimately to stop trying. Some had come from homes so emotionally disturbed and unhappy that it had been impossible for the child to make any constructive use of the learning process in school. Others had learned anti-authoritarian patterns and had, therefore, rejected the entire school situation as alien. Many of these patterns of behaviour altered during the early stages of the patient's stay in hospital. Attitudes could be modified and the patient's confidence rebuilt. Unhappy and lonely people began to form friendships with staff and other patients within the hospital, thereby rebuilding confidence in fellow human beings. All these factors operated to enable them to take a greater interest in basic educational attainment.

It was at this point that an active educational rehabilitation system would prove of inestimable value. The process of learning, of "further education", must be made gradual and attractive although there was a danger if this process were allied too closely to the hospital's schools, where it would be identified by the young adults as "kids' stuff", an attitude hostile to learning might be developed.

In considering the family, Dr. MacGillivray found most depressing the lack of contact between relatives and hospital patients. Some 30% of his patients were never visited and never went home. Morris (1969), found that only 57% of patients had been visited during the previous year and that there was a progressive decline in visiting associated with the age of the patient and the length of time in hospital. Thomson (1963), found that some 12% of patients were totally rejected by their families.

Effective rehabilitation depended to a great extent on the maintenance of effective and not merely formal contacts with the relatives. A major advance could be the active involvement of families in treatment, difficult in hospital, but possible in the community as parent-guidance with deaf and physically handicapped children had already shown. For people who had no effective home and who, because of retardation, were unable to fend for themselves in the general community, residential provision had to be found.

Adequate rehabilitation to the community was facilitated if the patient could find suitable employment and hospital social workers bore much responsibility for interviewing patients, discussing with them the techniques of applying for jobs, and assisting them in the early stages of writing applications and in certain cases, attending interviews. A further feature was the building-up of a pool of sympathetic employers who understood that the mentally retarded required not just sheltered employment but sympathy and help within normal employment. In this way, the patient's confidence could be maintained and misguided teasing on the part of other employees could be prevented or allayed.

There was a steady trickle of rehabilitable patients flowing in and out of hospital but the majority would always need residential care of some kind. At Lennox Castle, a number lived in hostel-type accommodation within the hospital and went out to work all day. While women trained in domestic work could always be found residential posts in schools, nursing homes and institutions, with increasing mechanisation on the farm residential male employment was becoming more difficult. "Boarding out" to unrelated guardians was a diminishing asset. Considerable help was given by the Disablement Resettlement Officer and the Industrial Rehabilitation Unit at Hillington, particularly with "awkward cases", but

with any economic chill, the retarded tended to be the last employed and the first dismissed.

Dr. MacGillivray felt that the public were now fairly well informed on the nature of mental illness but there was still much ignorance concerning mental deficiency which was far less well tolerated by the public than physical handicap. The worst fear of parents of mentally handicapped children was that they would finally be admitted to a mental deficiency hospital. This reflected the present reputation of these institutions, not entirely deserved and made worse by recent indiscriminate criticisms.

The public attitude, however explicitly or implicitly conveyed, determined policy towards the mentally retarded. Existing provisions were essentially the heritage of Victorian attitudes and despite increasing enlightenment, the public were not always enthusiastic when proposals were made for a hostel for the sub-normal in the community. The right of the handicapped to be absorbed in the community was elusive and could not be ensured by legislation. While the village idiot was accepted in the 18th century, it was doubtful if the present community was equally ready to receive its fellow citizens.

Those working with the mentally retarded were at present under pressure to distinguish between patients who were in need of hospital care and those who were not, to identify patients who were allegedly wrongly incarcerated in mental deficiency hospitals. There was confusion between "those who should not be in hospital" and "those who could be in a hostel" which were not the same thing. While it would be simple to transfer a group of 30 patients from a hospital to a hostel, this would not necessarily mean a change to community care.

Attempts towards establishing a partially independent life and earning a living might prove little more than a discouraging succession of failures. Delinquency and crime beckoned invitingly to the mental defective. Sexual promiscuity with its legacy of venereal disease and illegitimate children, fostered additional social hazards. For the mental defective, marriage and parenthood could create problems for which the patient was poorly equipped, and a common sequence of events was desertion by the spouse, breakdown and return by the defective, and the removal of any children to the care of the Social Work Department.

Fifty years ago local authority care was so ineffectual that hospitals had to be hurriedly built and staffed so that patients could be rescued from the Poor Law Institutions and from the guardians who exploited them. Now local authorities were expected to provide hostels to replace the hospitals. To quote George Santyana, "Those who forget the past are condemned to repeat it".

MRS. J. MATHESON, Social Work Adviser, Social Work Services Group, contrasted the range of services - hostels, training and occupation centres, social clubs and social case-work provided by local authorities, with the overcrowded and understaffed hospital service. There were a good number of patients in all but the newest two hospitals in Scotland who could live outside. Indeed, in at least three hospitals certain wards were used as hostels from which patients went out daily to work. The institutional image of the hospital was changing and efforts in this direction would be the most successful way of attracting and retaining staff who derived satisfaction from involvement in new and active programmes in modern hospitals.

There was clearly a need for local authority hostels, but the Social Work Department offered more than this and Mrs. Matheson contrasted the interest of doctors and nurses in promoting health with that of social workers whose interest was happiness and the psychologists and educationists who together were interested in work and achievement. These objectives were interdependent. The basic aim of social work departments was to help mentally defective children and adults to develop emotionally and live happily. With the application of child care principles to smaller groups, with fewer changes of staff, and with the planning of a series of opportunities for emotionally satisfying experiences over a wide range in addition to learning experiences of a cognitive kind, psychologists would go a long way to meeting the concern of the social worker for the freedom and emotional development of the individual.

For the rehabilitation of the mentally defective, local authority social workers were involved in liaison and personal services and in buildings and staff for their accommodation and employment.

It seemed likely that the social worker would be employed by the local authority, it being rather late to attract social workers to work wholly within the hospital. With social workers concerned with every type of problem, it seemed likely that unless the mental deficiency hospital was distant from the local authority involved, it would have to deal with a great number of social workers in the same way that general hospitals dealt with a number of general practitioners. In this way more social workers would learn about mental deficiency and the planning of hostel services might be more realistic.

Liaison formed an important part of the daily work of any social worker who represented the individual patient in discussions about employment whether with staff from hospitals, Industrial Rehabilitation Units, the Department of Employment, or local authority day centres, clubs, hostels or special schools. Where patients might be able to live with their own families or with others, the social worker would undertake full exploration of the situation prior to making any arrangements. Hostels, training or care centres, clubs provided by volunteers, and transport were all important practical services which the local authority could provide. There were now 69 training centres available and the provision of hostels was under consideration with a working party preparing guide material relating to their design.

For small groups of physically fit patients there was a case for having one or more council houses joined together and run by a married couple, the husband going out to work and his wife, with some help, running the house. The Scottish Society for Mentally Handicapped Children were interested in promoting this type of hostel. Larger purpose-built hostels ran the risk of becoming institutions and there was probably a limit to the number of married couples prepared to look after a large number of adults. Yet with larger groups, it might be easier to provide the kind of life preferred by some patients who were well settled in work and who had developed some emotional maturity. For patients with physical disabilities, purpose-built accommodation might be necessary and in due course there would be a demand for hostel accommodation designed for the elderly. For those of working age there was a case for relating one or two training centres to a number of hostels and clearly distance between work place, hostel and the home should be reasonable.

The Williams' report "Caring for People" made recommendations concerning conditions of work, staff accommodation, training courses and a career

structure for staff of hostels including those for the mentally handicapped. The provision of a separate house or flat within a hostel for the head, and the importance of clearly defining the duties and responsibility of the assistant head were two subjects covered in this report. There were now five courses in operation in England designed to produce people with a professional training in residential social work - people who would make hostels into places which were to a degree therapeutic in nature, places where the personal capacities of the residents could be developed. There would soon be a similar course in Scotland. For the staff of training centres, there was again need for a satisfying and comprehensive course. It was highly probable that some of the less disabled defectives would marry. With many of our multi-problem families at least one parent appeared to be feeble-minded and the practical help of the social work and local health departments would be invaluable in providing contraceptive advice and supplies to those whose need was not purely danger to physical health. While one or even two children could be supported, numbers in excess of two heralded the start of another problem family. Community care implied association of social workers with this type of family all over the country. Their services might be needed for years at a stretch and there was a case for close co-operation between the social workers involved and the hospital.

MR. T.D. BLACK, Principal Careers Officer, Corporation of Edinburgh, described the aims of the Youth Employment and Careers Service; to assist young persons to select, fit themselves for, obtain and retain employment suitable to their age and capacity and in so doing to assist employers to obtain suitable employees. At national level, the service was the responsibility of the Department of Employment through the Central Youth Employment Executive but in most local areas it was administered by the Education Authority. The Careers Officer was involved in providing careers information, in giving individual vocational guidance, in helping with placement in employment, and in undertaking follow-up which, for the handicapped, might involve home visiting.

Various factors limited or enlarged the choice of occupation for all young people and these included the availability of employment locally, their own abilities and attainments, the support or encouragement of their parents, their general background and environment, and the influence of their peer group. The pupil moving from school to work faced a sudden change of environment. His problems included his desire for independence, interviews for employment, concern about his ability to cope with the job, with an unfamiliar authority structure and with changing physical conditions involving longer hours and probably harder work.

For the mentally handicapped, these problems assumed greater proportions. While for young people less stigma arose from job changing than in the past, mentally handicapped youngsters had less opportunity to do so and there were obvious dangers. For these boys and girls the aim of vocational guidance was to identify as precisely as possible their abilities and those factors in their personality and background which were likely to influence success or failure in a job. In Edinburgh team activity took place in case conferences for mentally handicapped pupils in special schools prior to their reaching the individual vocational guidance stage. The team consisted of school staff, school Medical Officer, Educational Psychologist and the Careers Officer, and a broad assessment was made of the employment potential and future

individual requirements of the pupil. While these assessments had proved accurate and reliable in relation to future job choice and performance, the problems of movement of these children from the sheltered conditions of special school to the hazardous conditions of open employment remained. They often had difficulty in verbalising and in stating their ideas and it was not easy to assess their capacity to work at certain levels or at a given pace. With these points in mind arrangements had been made with the Department of Employment for a group of 12 - 15 handicapped boys and girls, selected at case conferences, to spend their last school term at the Industrial Rehabilitation Unit, to work for a spell in the sections there and to attend classes to learn about practical matters including form filling, use of a telephone, income tax and national insurance. Three courses were held each year. Assessments made in the work situation included tasks undertaken and rate of work and had made the placement of young people in employment much more realistic.

Mr. Black referred to a survey by Dr. R.N. Jackson on "Employment adjustment of educable mentally handicapped ex-pupils in Scotland" in which a group of 154 pupils were followed up for three years after leaving school. For boys, 27% of all jobs were of the delivery type, for example, in dairies, bakeries and laundries. Many of these jobs were of a type where there was impermanence of tenure and poor pay. For girls, 44% of the jobs were in the food, drink and tobacco industries which also employed a number of boys. Other jobs were in agriculture, horticulture, mining and quarrying. There were very few jobs connected with engineering but quite a number of boys in woodworking, particularly in saw mills. Few girls were employed in the clothing manufacturing industry where often the pace of work was too fast. While, due to the higher demand for labour, girls enjoyed greater job stability, they also suffered more long-term unemployment. Criteria of employment adjustment had proved difficult to establish but were eventually based on a combination of the number of jobs held and the length of unemployment. For both boys and girls over half were classified as "adjusted", under a third as "non-adjusted" and less than a fifth as "unemployable". The survey showed the importance of sympathetic supervision.

Mr. Black outlined some of the day-to-day problems connected with employment which faced mentally handicapped boys and girls. Some seemed quite conscious of their special school background and felt that this made them different from others. They could be affected by other workers who referred to the "daft" school. Some knew the problems of obtaining and retaining a job and left because they thought they were not doing well and might be paid off. Going for an interview could be a major hurdle. Repeated interviews for different jobs might be necessary and continuous refusals were upsetting. Occasionally they would attend for interview but would not go in. Careers officers normally had to encourage youngsters to follow up every opportunity, and the question arose of whether these boys and girls required someone with them when they went for interview. Some evidence existed to suggest that many of these young people would remain at a job but were paid off because they could not maintain the work speed and required excessive supervision. Many required considerable after-care supervision in their early working life. Careers officers lacked the necessary resources but tried to keep in close touch with the boys and girls who had attended the school-leavers course at the Industrial Rehabilitation Unit. Perhaps voluntary organisations could contribute more to the wider aspects of after-care.

The critical question was how ready were these pupils for employment, even after a special course at an Industrial Rehabilitation Unit.

Gradual introduction to employment perhaps by restricted or part-time working, increasing gradually to a full day might help. Perhaps pupils should be given work experience towards the end of their special school course. Again there might be a place for more intermediate centres as a bridge to full-time employment.

In conclusion, Mr. Black indicated that recent experiments had shown that more careers information about employment could be given effectively to pupils while still in school than had been done in the past.

MR. A. YOUNG, Regional Disablement Resettlement Officer, Department of Employment, described the service for which his Department was responsible as one for all handicapped people including the mentally handicapped, capable of remunerative employment.

A provision of the Disabled Persons (Employment) Act, 1944, was the appointment of disablement resettlement officers at each office of the Department to give guidance to the handicapped as to the nature of work most suited to them and to help them to find it. The D.R.O. maintained contact with the medical profession, social work services, voluntary associations concerned with the disabled, and employers. Many hospitals were visited by the D.R.O. on a regular basis where patients who required help in obtaining work were interviewed, medical and other evidence being provided at this stage. The D.R.O. was specially trained and worked on the principle that the most suitable work was that which the disabled person could keep on his merits in competition with his fellow workers.

For the mentally handicapped, local authorities had increased the facilities for diversional work at occupation centres. A particular problem was acceptance of the individual by fellow workers. Work centres were in operation and sheltered employment facilities were available in some parts of the country. The accent in occupation centres was on productive work whereas in occupational therapy departments of hospitals work therapy was emphasised, some having well organised industrial therapy units. Progression was thus from occupational therapy through industrial therapy in hospital to sheltered and eventually open employment. It was where industrial therapy had been successful that the D.R.O. became involved.

In Edinburgh the opening of Eversley House in 1963 as a half-way house where patients from Gogarburn Hospital could be accommodated during industrial rehabilitation courses or when in employment, had facilitated the resettlement of these patients into work. While other such hostels existed, demand far exceeded the supply.

The D.R.O. service had been in operation for 26 years, but following recent reorganisation, the aim was to provide continuity and a full-time professional service to disabled persons, hospitals and employers. There were now 54 full-time Area D.R.O.s in Scotland organised in a regional service with headquarters based in Edinburgh and in Glasgow. In addition, there were D.R.O.s at each of the rehabilitation units at Edinburgh, Glasgow and Bellshill.

It was a condition of registration under the Disabled Persons (Employment) Act that a person must be willing to work, must be capable of some form of remunerative employment (either open or sheltered) and that there must be reasonable prospects of his obtaining employment. Registration as a disabled person was voluntary but the service was available to disabled

persons whether or not they were registered under the Act. Open employment was work in ordinary industrial conditions. Employment in sheltered conditions differed in that the production rate expected from someone in sheltered employment was lower than would be expected from other workers. It was a condition of employment under sheltered conditions that the person must be registered as a disabled person. There were 12,010 registered disabled mental defectives in Britain, 1,233 of whom were in Scotland.

In Scotland there were 12 sheltered workshops, two run by local authorities and ten by voluntary organisations. In addition, there were ten Remploy factories and five workshops for the blind. Altogether 1,769 persons were employed in these workshops. One of the workshops catered specifically and another mainly for the mentally handicapped, and such persons could be considered for other workshops according to their ability to meet the demands of the type of work available.

Mr. Young stressed the need for a multi-disciplinary approach to the resettlement of the mentally handicapped as was the case with all disablements. The value of communication and co-operation with all workers in the field could not be over-stressed and in this connection the D.R.O. had contact with hospitals, social workers, education authorities, indeed with practically all the organisations represented at this conference.

MR. M. MACKENZIE, Rehabilitation Officer, Hillington Industrial Rehabilitation Unit, described the service provided by the Department of Employment Industrial Rehabilitation Units as one for people of all ages who, after illness or injury, required help in getting back to working fitness. In addition, short courses were offered in industrial conditions which were designed to assist the older or redundant worker who required guidance or assessment for a change of job. While most people who had suffered illness or injury were able to return to their old job or take up new ones on completion of medical treatment, there remained a number of patients who required further help to regain working fitness and to regain confidence in their ability to do a full day's work. It was to meet this need that the Government of the day set up Industrial Rehabilitation Units.

An Industrial Rehabilitation Unit could be regarded as a factory turning out a variety of sub-contracted work and also engaged in clerical and commercial work and in some units horticultural work. It could be regarded as a transitional community between the environment of a mental hospital, occupation centre or sheltered workshop and the more mechanistic factory concept. Hillington accommodated about 100 persons and offered courses which lasted about eight weeks. There was provision to keep people about six months if necessary, and a worker-employer relationship was substituted for the doctor-patient roles of the hospital environment. Working sections included engineering, bench fitting and welding, woodwork, light assembly work, gardening, and other outdoor activities. In special cases the canteen and stores could be used for assessment purposes.

Rehabilitation was essentially a multi-disciplinary affair. A team which included doctor, occupational psychologist, social worker, disablement resettlement officer and technical officer, together with workshop supervisors, worked under the direction of a rehabilitation officer who co-ordinated all the activities of the unit. A consultant psychiatrist visited as required to give advice and help with psychiatric cases.

The team met each week in case conference. It defined the problems of each new entrant, planned a specific course for him and kept his progress under review. On completion of a course the individual might return to his former employment or be placed in a new job. About 20% were recommended for vocational training at Government training centres, commercial colleges or at residential colleges for disabled persons. A number might require employment under sheltered conditions for example, as provided by Remploy Limited. Of those who passed through an I.R.U. and remained unsuitable for employment, 25% were psychiatric and 5% mentally handicapped. Persons were eligible for admission to an industrial rehabilitation unit provided there was prospect of suitable employment being available for them on completion of the rehabilitation course. It was therefore unlikely that persons with a very low I.Q. would come within these terms of reference. At Hillington in 1969, less than 10% of the unit population came within the category of mentally handicapped, but follow-up of this group six months after leaving the I.R.U., indicated that they fared very favourably compared with other groups as regards employment. Success with the mentally handicapped depended to a large degree on how acceptable was their behaviour to other adult workers. Social immaturity or childish behaviour was frequently a greater barrier to employment than was low intelligence or illiteracy.

In any young person's life and particularly where there was physical or mental disability, the transition period from school to work was critical. It was at this time that help had to be given in choosing and preparing for the work that he wanted to do, work which was within his physical and mental capabilities. In 1968, special courses were started at Hillington, each for 16 handicapped school leavers attending special schools. The object of these was to provide work preparation for young people where it was anticipated, on account of handicap, difficulties would be experienced in obtaining and settling into suitable employment. The scheme involved close co-operation between the industrial rehabilitation unit and local education authorities. A teacher seconded by the education authority had a classroom in the I.R.U. where the bias was towards making the young people familiar with conditions they would meet in taking up employment. At least half of the time was spent in the unit workshop, where under the guidance of a specially selected supervisor, they were introduced to work discipline and practices. Later in the course they were transferred to the main workshops where they worked alongside adults. Hillington could accommodate 48 such young people during the year, and the follow-up conducted a year after leaving the rehabilitation unit indicated that 90% were in employment.

There were sound economic reasons for developing a rehabilitation service for the handicapped. The mentally handicapped should be regarded as exceptional persons requiring exceptional treatment and resources in order that the maximum number might be able to play a positive role in society. Success in the field of rehabilitation depended on good co-operation and co-ordination with hospital staff and others concerned with the individual; only by having good team work could difficult cases be rehabilitated.

MR. S. JACKSON, Principal Lecturer, Department of Remedial Education, Jordanhill College of Education, described his main function as the provision of training courses for teachers and others connected with handicapped children or adults. His work was concerned mainly with teachers in special schools. His department, however, was running courses for staff for both senior and junior occupation centres, and whereas the special school teacher in training had whole libraries, training staff, and experience on which he could draw, the training of occupation centre staff was based largely on common sense. Whatever measures were taken to

rehabilitate the mentally handicapped adult into the community, one crucial factor was the quality of the senior occupation centre staff who would be responsible for whatever education or training was available to him. It followed that the length and quality of the training available to staff should have a powerful effect on the personal development of adult defectives. In practice, Mr. Jackson claimed, this was not so, partly because the only training available was one course of eight weeks' duration but also because local and national authorities were unsympathetic toward ideas in advance of 19th century practice.

The objective of many senior occupation centres appeared to be economic productivity, rather than education. The result of this was for the trainee, intellectual and social atrophy. Great skill was used in obtaining contracts for repetitive work, and in reducing the process of production to actions so simple that the trainee was denied any opportunity to think and to use his initiative in solving problems. At its extreme, the "production first" policy resulted in the intelligent instructor joining with the trainees on the production line to help produce goods on time.

None the less, a minority of senior occupation centre supervisors and physician superintendents of mental deficiency hospitals recognised that adult defectives were not homogeneous. Their intellectual and social needs were as varied as any other community group. The range of ability (I.Q. from 30 - 70) and age among the senior occupation centre population was wider than that of a school for mentally handicapped children, and the objective of a senior occupation centre should be the achievement for each trainee of the maximum amount of personal independence and the all-round development of his social, intellectual, physical and emotional life. Where these principles were grasped, resultant practice included a careful assessment of each trainee to discover at what level and in which area his education should begin, a balanced programme based upon this assessment, and a regular review of his all-round progress.

A most important but often neglected skill in the senior occupation centre was that of communication. Few centres had a systematic language-development programme and there was little evidence that the senior centre was a place where the personal skills taught in the junior occupation centre could be developed. Most senior occupation centre staff assumed that all language training should cease when the child left the junior occupation centre, yet it was at adolescence that many defectives began to see the use of reading and were most easily taught.

Socialisation programmes, where they existed, were often grossly artificial. To teach an adult defective the different techniques required for shopping in a supermarket and in the corner shop, eating in a snack-bar and in a restaurant, walking in the city and in the country, behaving in Church and in a public house, the teaching had to be given in the actual situation in which the skills would be practised. The senior occupation centre should be seen, not as a refuge, but as a base from which training for life in the community could be organised.

The skills necessary for the staff of senior occupation centres involved an awareness of the learning capabilities and needs of adult defectives, an appreciation of teaching techniques not yet taught even in colleges of education, certain industrial skills, the ability to negotiate for contracts and organise a workshop, a readiness and ability to co-operate with doctors and social workers, and an understanding of abnormal psychology. The present length of training for senior occupation centre staff was dreadfully inadequate. The short course now available was rarely attended by supervisors and there was a danger that any progressive

ideas which instructors might gather from their training would have little chance of being put into practice.

Mr. Jackson called for a lead from the Social Work Services Group in putting forward proposals for the running of senior occupation centres and for a complete overhaul of senior occupation centre staff training, both of which were long overdue.

DISCUSSION

Opening the discussion, MISS K.B. RICHARDS, Director of Social Work, Clackmannan County Council, stressed the need for liaison between the various organisations from which the day's speakers had been drawn. The general medical practitioner could make a significant contribution to the management of the large majority of mentally handicapped who lived in the community. Initial multi-disciplinary assessment was particularly important. There was a need for modification of both parental and community attitudes to the problems of the mentally handicapped and the management of whom would be facilitated by a more flexible admission and discharge policy on the part of the hospital.

Support required to ease the family burden involved the provision of more home helps and of day nurseries. Rehabilitation involved mobilising of capacities of both individual and community. The place of industry in society had been discussed in Clackmannanshire and while work processes could not always be modified to suit the handicapped, the possibility of linking industry and local authority to provide sheltered occupation for the handicapped and to organise playgroups was real. The need for an interdisciplinary approach constituted a liaison problem for the hospital.

In each social work department there would be advantages in nominating one identifiable person responsible for liaison.

The principal points to emerge from the ensuing discussion included the following:-

(1) Social training

It was argued that social skills must be taught in situ. For example, mentally defective children needed to learn to shop in shops - simulated shopping situations simply confused them. It was recognised that social training began at home and that the training offered in training centres must relate to home circumstances. There was an implication that parents and others should be included in the programme arranged for trainees.

(2) Educational potential

The conference was urged to concentrate rehabilitation and educational resources on the majority of the mentally handicapped population who were relatively mildly affected. The educational level attained by most mentally handicapped appeared to be well below their capacity, and indeed by focusing on education at preschool age a great many need never enter hospital. It was said that in at least one county in England appropriate educational efforts had succeeded in reducing admissions to M.D. hospitals to a rate below one-tenth of what it was 10 to 15 years before.

(3) Hospital admissions

Attention was drawn to the large group of the mentally handicapped who should not need hospital care in the future, given adequate resources and a change of community attitudes (particularly to behaviour problems). The role of prevention had been under-emphasised, and reference was made to a project at Milwaukee which was aimed at bringing appropriate resources to bear on families likely to produce a defective child.

(4) The size of the problem

There was said to be considerable variation in the scale and effectiveness of the M.D. service in various parts of the United Kingdom. Waiting lists for admission were quoted as varying from two months to four years, and there were considerable regional variations in the provision of M.D. beds and other facilities. Ascertainment was easier in Scotland insofar as the population was smaller than south of the border, but there was no case for complacency about standards or objectives.

(5) Methods of care

There were many references to the efforts made in M.D. hospitals directed at the happiness and full development of their patients and to the fostering of an effective liaison with local communities. There remained, however, the criticism that hospital trained personnel remained institutionalised, and that there was need for a new pattern of care rather than adaptations of existing concepts. In this connection concern was expressed at the quality of many of those answering staffing advertisements for hostels.

Efforts made in M.D. hospitals to match normal living patterns were noted. These included the provision of shops, social units, traffic lights, etc. within the grounds. There was, however, a regrettable absence in Scottish hospitals of educationists to take up the pioneering work of Gunzburg.

(6) Liaison

The conference was generally welcomed as a much needed spotlight on the need for better liaison between hospital, social work, educational, and rehabilitation interests. Inadequate communications could lead both to over-provision and to gaps in the service. Hospital planning would need to take account of a shift of emphasis - particularly with children - towards hostels. Administrative changes from education to health and now to social work had resulted in loss of contact with a number of children who had left special schools; there was a need for these children to be traced.

(7) Training centres

There was some discussion as to whether it was the function of the senior training centre to provide sheltered work. Where sheltered work was provided elsewhere, the argument was that instruction and practice in the training centre was incompatible with working on contracts. On the other hand it was argued that if there was no production target, there was no pride in work. The graduation from socialisation-based activity to work-based activity was clearly a matter for careful judgement aimed at maintaining a balance. The potential capacity of many trainees was greater than was sometimes

recognised, and their happiness and satisfaction equated with their sense of achievement at work.

Concern was expressed that the resources presently available for the training of teachers to work in training centres were quite inadequate. This matter was currently under discussion.

(8) Hospitals, hostels and the community

The morale of staff in M.D. hospitals was said to be suffering from the support being widely expressed for the idea of moving patients to hostels, with the implied criticism of the care they are receiving in hospital. Different types and size of hostel could meet various needs and the position was far from clear. It was argued that hostels were needed for mental defectives who were not at present in hospital, that few patients could in fact be discharged from hospital and that the results of surveys on this subject had proved over-optimistic. Many elderly mental defective patients developed physical defects which required hospitalisation and nursing care. Reference was made to Eversley House which had 17 places for patients from Gogarburn Hospital. This hostel was functioning successfully and there was a need for a similar hostel for female patients capable of going out to work in the community, but requiring a hostel in which to live.

(9) Design for disability

Attention was drawn to the fact that many mental defectives suffered from physical disabilities. This should be positively recognised in the design and equipment of hospitals, training centres, hostels and other facilities intended for their use.

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